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ABSTRACT

A set of guidelines for implementing an individualized mathematics program to be utilized in a bicultural/bilingual setting were developed. At first, the design team sought to develop an all-purpose model complete with specifications of particular objectives, but the team soon recognized this goal to be unrealistic, since different school districts and schools within the districts provide different mixes of bicultural/bilingual needs. As a result, the team came up with a spectrum of bilingual education patterns leading to various possible approaches for the implementation of an individualized mathematics program. These various possible approaches are described in this final report. Discussed in detail are the 3 key phases needed in building a new bilingual/bicultural program, including (1) the planning phase, (2) the development phase, and (3) the implementation phase. This report also discusses the necessary elements needed to implement a mathematics program with a major emphasis on local needs and the major subsystems dealing with the learner, instructional, and support components of the program. The steps for utilizing the model are highlighted, and key recommendations are given for determining need and securing support, establishing curriculum development capability, implementing the program, and evaluating and revising the program design. (NQ)

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FINAL REPORT

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THE TRIANGLE PROGRAM PLANNING PROJECT

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FORWARD

The major charge of the Triangle Program Planning Project was to develop a set of guidelines for the implementation of an individualized mathematics program to be utilized in a bicultural/bilingual setting. Originally, the design team saw this goal as the development of a specific unilateral framework to serve all schools in all districts where bicultural/bilingual education is necessary. This original goal has now been broadened considerably.

The team recognized that the concept of a single program for all schools was narrow. As information and data were gathered from key bicultural/bilingual experts, a wider view of the topography of useage became apparent. Different school districts (and indeed different schools within a district) provide different mixes of bicultural/bilingual needs. Hence an all-purpose model complete with specification of particular objectives was not realistic.

What emerged is a spectrum of bilingual educational patterns leading to various possible approaches for implementation. These approaches are fully described within the report. The report thus alerts potential users to the need to evaluate their own local situation in the context of the model.

This model, including the major subsystems dealing with the learner, instructional and support components, provides all the necessary elements to implement a mathematics program. But the emphasis is on local needs, population, resources, etc., being provided.

The final report is a product of considerable sensitizing of the design team to the historical and cultural factors underlying bilingual/bicultural education. The important input via written documents and considerable discussions from a group of consultants influenced the outcome. The team now feels that unless an understanding of key cultural elements affecting learning is not comprehended, the implementation of the program will not be successful.

Finally, the reader should be alerted to the dramatic change in the position of the members of the design team. Prejediced at first to a narrow view of bilingual/bicultural education, the teams's concepts and notions about "approach" was shaped by a deeper understanding and familiarity of this area of education. Cultural factors became more dominant. The relevance of this shift should not be lost on administrators, developers and teachers dealing with children, for, indeed, their prejudices are not too different from those originally held by the staff and much of the consultant team.

A table of contents follows to assist the reader in understanding the development of the model. Chapter eight summarizes the Triangle Model and offers key recommendations. This chapter highlights the steps for utilizing the model.

TABLE OF CONTENTS

PART ONE: OVERVIEW

Chapter One: Introduction - The Triangle Program

A) The Problem
    1) Spanish-speaking children are far behind in school achievement
    2) Basic skills are not being acquired
    3) Language difficulties affect all other school performance
    4) Cultural considerations are not being properly attended to
    5) Students need special programs
B) The Response
    1) Some progress being made in local programs
    2) Other efforts may only be marginally useful
    3) A new effort would have comprehensive requirements
C) Genesis of this Report
    1) Creating the idea
    2) Formulating the proposal
    3) Securing the support
    4) Conducting the planning project

Chapter Two: The Triangle Program Planning Project

A) Assumptions
    1) Pluralism of bicultural communities
    2) Guidelines, not mandatory prescriptions, lead to context-based programs

B) Goals

  1) Design specifications for the development in mathematics and other areas of student competency-based performance objectives, activities, instructional materials, and assessment procedures

  2) Design specifications for the development in professional and personal areas of teacher competency-based objectives, instructional strategies, in-service training, and assessment procedures

  3) Design specifications for the development of administrator, parent, and community support activities, and for overall program evaluation

C) Strategy

  1) Operationalizing the Proposal

  2) Seek input from consultants

  3) Review and analyze data from consultants

  4) Create preliminary design of Triangle Model

  5) Submit Model to school reviewers for feedback

  6) Revise design and prepare final report on Triangle Model

D) Organizing Ideas

  1) Objectives competency-based, individualized

  2) Developmental areas are interactive

  3) Personal growth and development underlies all other performance

  4) Cultural patterns especially influential in the bilingual/bicultural setting

PART TWO: THE TRIANGLE MODEL

Chapter Three: Introduction to the Triangle Model

A) Structure

  1) Information/knowledge base

    - 2) Subsystems: learner, instructional, support
- B) Features of the Model
    - 1) Responsiveness
    - 2) Uniqueness
- C) Delimitations
    - 1) Level of generality
    - 2) Presumes capability for various general functions
    - 3) Information/knowledge base an exemplar
    - 4) Limited population
- D) Definition of Terms
    - 1) Systems terms: model, subsystem, exemplar
    - 2) Contextual terms: bilingual/bicultural, Mexican-American, majority culture

Chapter Four: Cultural Patterns

- A) The Mexican-American Culture
    - 1) The "Mexican-American"
    - 2) The "Extended Family"
    - 3) Sex differentiation
- B) Bilingualism
- C) Relationship to the Majority Culture
    - 1) Reactions to the American "core culture"
    - 2) Modes of bilingual education
- D) Cultural Democracy
- E) Field Dependence and Field Independence

Chapter Five: The Learner Subsystem

A) Introduction
    1) General educational philosophy
    2) General goals and objectives
    3) Bilingual/Bicultural educational philosophy
B) Student Goals and Objectives
    1) Introduction
    2) Mathematics
    3) Reading
    4) Language
    5) Personal development
    6) Summary
C) Student Learning Experiences
    1) Activities in mathematics and other areas
    2) Learning materials
D) Student Evaluation
    1) Modes of evaluation
    2) Phases of evaluation
    3) Evaluation in the four areas

Chapter Six: The Instructional Subsystem

A) Introduction
    1) View of the teacher
    2) Relationship to the learner subsystem
    3) Adaptability of the instruction subsystem

B) Teacher Competencies
    1) Personal
    2) Professional
C) Teacher Experiences
    1) Classroom instructional strategies
    2) Application of "cultural patterns"
    3) In-Service training program
D) Teacher Evaluation
    1) Elements of an accountability system
    2) An "output accountability" system

Chapter Seven: The Support Subsystem
A) Introduction
B) Administrators and other schoolpeople
C) Parents and Community

Chapter Eight: Summary and Recommendations
A) The Triangle Program
    1) The problem
    2) The response
    3) Genesis of this report
B) The Triangle Program Planning Project
    1) Assumptions
    2) Goals
    3) Strategy
    4) Organizing ideas

C) Introduction to the Triangle Model
  1) Structure
  2) Features of the Model
  3) Delimitations
  4) Definition of terms
D) Cultural Patterns
  1) The Mexican-American culture
  2) Bilingualism
  3) Relationship to the Majority Culture
  4) Cultural democracy
  5) Field dependence and field independence
E) The Learner Subsystem
  1) Educational philosophy
  2) Goals and objectives
  3) Learning experiences
  4) Evaluation
F) The Instructional Subsystem
  1) View of the teacher
  2) Competencies
  3) Teacher experiences
  4) Evaluation
G) The Support Subsystem
  1) Introduction
  2) Administrators and other schoolpeople
  3) Parents and community

H) Recommendations for Utilization of the Triangle Model
    1) Determine need and secure support
    2) Establish curriculum development capability
    3) Assess resources and existing programs
    4) Plan and design a Triangle Program
    5) Establish a program management capability
    6) Implement the Program
    7) Evaluate and revise the Program Design

I) Proposal for Next Phase

Appendix A: Planning and Consultant Staff

PART ONE

OVERVIEW

Chapter 1: Introduction to the Triangle Program

Chapter 2: The Triangle Program Planning Project

CHAPTER ONE

INTRODUCTION: THE TRIANGLE PROGRAM

A) The Problem

1) Spanish-speaking children are far behind in school achievement
2) Basic skills are not being acquired
3) Language difficulties affect all other school performance
4) Cultural considerations are not being properly attended to
5) Students need special programs

B) The Response

1) Some progress being made in local programs
2) Other efforts may only be marginally useful
3) A new effort would have comprehensive requirements

C) Genesis of this Report

1) Creating the idea
2) Formulating the proposal
3) Securing the support
4) Conducting the Planning Project

A) THE PROBLEM

1) Spanish-speaking children are far behind in school achievement.

Billions of dollars have been spent in attempts to improve American education, but as yet there has been little broadscale national improvement in the education of those for whom English is a second language. These students, comprising such major culturally-different groups as the Mexican Americans and Puerto Rican Americans, have instead fallen perhaps even further behind as their classmates benefited from new educational practices. Among other evidences of this was the finding in the Coleman Report that well more than a third of the Spanish-speaking students studied agreed with the statement, "I sometimes feel that I just can't learn."

2) Basic skills are not being acquired.

Of particular concern to educators and the parents of such groups as Mexican-American students is that the basic school skills are not being adequately learned and that this insures further years of school failure and disappointment for the children. When a child cannot acquire a basic competency in communication skills like English language and reading, or in such areas as mathematics, such inadequacies will trail the student all the way through schooling, as performance in other areas will be dependent in substantial part upon previously acquired skills.

3) Language difficulties affect all other school performance.

The overall problem is that children who come from Spanish-speaking homes are at a tremendous disadvantage in school until they have acquired

English speaking, reading, and writing skills. This is because the school culture in the United States is based on English, and instruction in such critical areas as mathematics may remain in English even when primarily Spanish-speaking children are present. Even when teachers try to compensate by using the child's native language, the instructional materials usually available are not likely to reflect the bilinguality needed.

Thus while these students are struggling to learn English, their school problems are compounded by the fact that they must also frequently learn the other subject matters in English as well, or risk falling far behind. A more equitable way of treating these students therefore would be to permit them to study various skill areas in their native language, while they learn and adapt to English. They can then switch gradually into learning other subject areas in English. But they must feel comfortable with the language first.

4) Cultural considerations are not being properly attended to.

Added to the language problem is the fact that cultural considerations are often neglected in determining the course of instruction in various skill areas. Although a "heritage" or "ethnic unit" may be provided for the Spanish-speaking students, the implications and considerations for learning flowing out of this heritage and cultural background are often ignored or neglected. There are very subtle factors affecting interactions with any children, but especially so with children who begin their schooling in a culture which is so different from the one to which they've been accustomed. These differences have consequences for student performance and achievement, instructional strategy, activities and materials, assessment, and other dimensions of a classroom program.

5) Students need special programs.

Taken together, these factors of language and biculturalism posit many problems for the student. They prevent him from making normal progress in basic areas of school performance, even while trying to surmount the language problem. And when some progress toward English as a second language has been made, and it begins to be reflected throughout his work in other areas besides speaking, writing, and reading, the child is still liable to be perceived and related to without understanding or concern for personality attributes and cultural factors which have powerful impact upon these children's lives and especially their behavior in the school setting.

Thus the need is for programs which will help a culturally different child, in this instance the Mexican-American child, to learn in key subject areas while acquiring language competency; for materials which take into account the language and bicultural differences; for teaching strategies which reflect concern for the bilingual-bicultural differences. The student must be enabled to learn English, to be sure, but at the same time to move forward in other areas of the school curriculum, and at no disadvantage because of the incipient quality of his second language skill. And, in addition, the way such children are treated in the classroom, indeed the way these children have a right to be treated, ought to reflect the application of concepts which will most likely issue from understanding, compassion, and interest in their personal makeup and cultural backgrounds.

American education is committed to the principle of equal educational opportunity for all students. Yet daily, Spanish-speaking youngsters attend classes in which the language and customs of instruction is incomprehensible to them. This bodes ill for their chances for achievement, and the corresponding growth of personal pride and confidence which comes from successful school performance.

B) THE RESPONSE

1) Some progress is being made.

To meet the need just described, efforts attacking various parts of these problems have been instigated around the nation in recent years. Appropriations for bilingual and/or bicultural education in the Office of Education at the federal level, and in various states and local communities, have risen dramatically. Some states now have task forces or special projects in bilingual/bicultural education. The new National Institute of Education has indicated that one of its significant concerns is bilingual education.[1] National programs have been directed where possible to communities including high proportions of minority students, including Mexican-Americans in such states as California and Texas.

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[1] Harry Silberman, "NIE: The Planning Process," Educational Researcher, Vol. 1, July 1972.

2) Many efforts only somewhat useful.

But while some excellent programs have been devised in recent years to begin to deal with bilingual/bicultural learning settings,[1] others have often been narrowly conceived, focusing only on English as a second language or developing instructional materials on cultural heritage. Still in a formative stage is the concept of other subject areas being incorporated in a comprehensive design which includes attention to the cultural background and personal development--as well as academic--of the child. The model described within the following pages does attempt to deal with all of these dimensions.

One problem with establishing programs in a new area life bilingual/bicultural education is that in the effort "to get something in place," it may be necessary to rush from an initial conception to a pilot program, without adequate consideration of some primary variables which could affect the program. Many school-change efforts exist under the immediate pressure to show results. Also, it is often probably hoped that some issues can be resolved along the way.

3) The requirements of a new comprehensive effort.

Against this background a group of people about a year and one half ago suggested that a program might be designed with adequate planning which would take into consideration a wide number of variables and apply up-to-date educational ideas and technology to the bilingual/bicultural classroom. The idea was not to come up with a panacea for the entire field, but to offer one competitive program based upon a comprehensive model.

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[1] These include programs in Dade County, Florida; Hartford, Conn.; District #3 in New York City; and Riverside, California.

A strategy was adopted to build a new bilingual/bicultural program with three key phases:

First, the planning phase, in which information is gathered and ideas reviewed and analyzed, to yield a model or plan for development.

Second, the development phase, in which the model or plan would be applied to selected contexts and a program designed for particular communities.

Third, the implementation phase, in which the particular program designed according to the model would be installed in a community and evaluated for its change effects on children.

These phases are displayed graphically in Figure 1.

C) GENESIS OF THIS REPORT

The strategy previously outlined begins with a planning phase to build a Triangle Model. This phase can be itself divided into the following sequence:

1) Creating the Idea: the concept of a model to meet some of the critical needs described earlier was formulated by a San Francisco-based education company, Communication Patterns, Inc. After submitting the idea to various authorities concerned with bilingual and bicultural education, including officials of various state departments of education, Communication Patterns undertook to organize a project which would carry out the planning process for a new program to be based upon a Triangle Model.

Phase	Function		Product
Planning	gather information, review ideas; analyze data, plan a framework	→	Model or framework for a program
	↓		
Development	apply model, use framework to develop a program for certain context	→	Program based on local needs, interests, resources
	↓		
Implementation	install program in community	→	Change in children

Figure 1

2) Formulating the Proposal: a proposal was prepared which explicated the idea for a Triangle Program, to begin with a planning project which would formulate a blueprint (model) for school districts wishing to develop a Triangle Program. This proposal was prepared from the winter of 1971 through the Spring of 1972, and submitted to the federal Office of Education.

3) Securing the Support: government funding on the proposal to activate a planning project for the Triangle Program was approved in June 1972. Funds were provided from the Applied Research Branch of the Division of Research, Office of Education, Department of Health, Education, and Welfare. The planning project was supported for a four month period beginning in June 1972.

4) Conducting the Planning Project: this was activated in June and the data gathering and analysis commenced to provide input for the design of a Triangle Model which could serve as the basis for a bilingual/bicultural program. This report is the consequence and product of that planning effort.

CHAPTER TWO

THE TRIANGLE PROGRAM PLANNING PROJECT

A) Assumptions

1) Pluralism of bicultural communities

2) Guidelines, not mandatory prescriptions, lead to context-based programs

B) Goals

1) Design specifications for the development in mathematics and other areas of student competency-based performance objectives, activities, instructional materials, and assessment procedures

2) Design specifications for the development in professional and personal areas of teacher competency-based objectives, instructional strategies, in-service training, and assessment procedures

3) Design specifications for the development of administrator, parent and community support activities, and for overall program evaluation

C) Strategy

1) Operationalizing the Proposal

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3) Review and analyze data from consultants

4) Create preliminary design of Triangle Model

5) Submit Model to school reviewers for feedback

6) Revise design and prepare final report on Triangle Model

D) Organizing Ideas

1) Objectives competency-based, individualized

2) Developmental areas are interactive

3) Personal growth and development underlies all other performance

4) Cultural patterns especially influential in the bilingual/bicultural setting

A) ASSUMPTIONS

In formulating goals and strategy for the planning project, several key assumptions were made which affect the various phases of Triangle Model development. These are as follows:

1) Pluralism of bicultural communities.

Americans live in a highly pluralistic society, which is nowhere better reflected than in the variegated populations of public schools. This pluralism extends even to subgroups of groups, such as different communities of Spanish-speaking students. Mexican Americans are different in some significant ways from Puerto Rican Americans and from Cuban Americans. In fact, even within the larger community of Mexican Americans in this country there are significant differences in such matters as the desire for assimilation or separation, and these differences could spell alternative prescriptions for the educational systems of those communities. Thus we might see important differences between the schools having large Mexican American populations in Los Angeles from those in San Antonio, or both of these from populations in Chicago.

Thus it is imperative that the principle of pluralism be extablished from the beginning, otherwise the model is too limited to be widely useful. It cannot be utilized in any widespread or very significant sense if it does not provide for flexibility in the determination of such fundamental choices as, for example, the selection of goals, activities, and materials; evaluation systems, characteristics desired of those who instruct, and the degree of community participation.

2) Guidelines, not mandatory prescriptions, lead to context-based programs.

In light of cultural pluralism, the Triangle Model must be prescriptive only at a level which permits its wide use and application in a variety of settings. Thus we work here towards a set of guidelines and exemplars, not hard and fast mandatory prescriptions. The general framework of essential elements of a Triangle Program are spelled out by the Model. These guidelines thus constitute a useful tool for communities which are facing the problems of bilingual/bicultural education.

However, in order for these guidelines to have impact on education, they will have to be set in contexts and "filled out" for individual cases. This can only be done in individual school districts and communities where programs of this type are needed and desired. Many decisions have to be made by that school or district; these guidelines organize a number of considerations attendant to establishing programs of the type described herein. Curriculum development teams, curriculum development teams, curriculum supervisors, special task forces or others must take these guidelines and apply them in the light of the circumstances of their own particular district: What is the commitment to bilingualism/biculturalism, which affects the determination of objectives? What resources can be utilized, and what is already in place? What are the standards of evaluation or accountability in that local area or state? These considerations can be pointed to, and a schemata for drawing them together in a coherent program delineated; but the development of a program based on these guidelines must ultimately be completed with regard to the local circumstances of each population group and their community.

B) GOALS

The overall goal of the Triangle Program is to generally improve the performance levels of children in bilingual/bicultural settings in various key areas, especially mathematics, at the elementary school level. The goal of the Triangle Program Planning Project was therefore to design the specifications and guidelines of a model which could provide the basis for local development of Triangle Programs.

Specifically, the model would include specification and guidelines to provide a blueprint for a district development team to establish:

1) student competency-based performance objectives in mathematics and other areas, as well as the activities, materials, and evaluation procedures necessary to support fulfillment of those objectives.

2) personal and professional competencies required of the teacher and paraprofessional in the Triangle classroom, with the suitable instructional strategies which might facilitate a student reaching his objectives, including the in-service training, and evaluation procedures necessary to support acquisition of those teacher/paraprofessional competencies.

3) administrator, parent, and community support of the program

C) STRATEGY

In order to create a Triangle Model in this planning phase which could serve as the basis for local development and implementation, the following sequential strategy was pursued for construction of the Model:

1) Operationalize the Proposal: once approval was received from the funding agency, Communication Patterns, Inc. took charge of the planning phase by determining task assignments for the various consultants who would provide basic data for the model, setting deadlines, and preparing for the various reports. This allocation of assignments was made by the staff of Communication Patterns, Inc., which included the following:

Dr. Jerome Kaplan
Director of Educational
Programs and Project Director

Mr. Alexander Contis
President

Mr. Monroe Schakner
Vice-President

(For a brief description of the staff members and consultants, see Appendix A.)

2) Seek input from consultants: experts were identified in various disciplines which impinged on the general problem area. Thus

consultants in bilingual education, mathematics, language, evaluation, and other areas were requested to provide information about various issues identified in the project proposal. The consultants providing input included:

Dr. James Cowan
Superintendent, Ventura County
(Calif.) Schools

Dr. Stephen Dobbs
Consultant, Far West Laboratory for
Educational Research and Development

Dr. Abraham Fischler
President, Nova University

Dr. Henry Palmer
Consultant, Los Angeles County Schools

Dr. Robert Ponce
Consultant, Ventura County
(Calif.) Schools

Dr. Manuel Sanchez
New York Community, School District #7
New York City

Mrs. Evelyn Spache
Assistant Professor, University
of Jacksonville

Dr. George Spache
Professor, University of Florida

Systems and Evaluations in Education, Inc. (S.E.E.)
Dr. Alfredo Castaneda
Dr. Leslie Herold
Dr. Manuel Ramirez III

3) Review and analyze data from consultants: as inputs were received from the consultants, the data was reviewed and analyzed for significant ideas which might contribute to sections of the model. Issues were sharpened and brought into focus, new details were revealed,

and considerations for the model were elicited. This review and analysis was conducted by an ad hoc design and writing team, consisting of consultants Cowan, Dobbs, and Ponce.

4) Create preliminary design of Triangle Model: from the review and analysis of the consultant inputs a preliminary design for the Triangle Model was conceived, which would serve as the basis for feedback from school-based reviewers who had not been previously introduced to the ideas of a Triangle Program.

5) Submit Model to school reviewers for feedback: the preliminary design of the model was submitted to an extremely able and diversified group of school-based persons who could provide reactions to the Model both in general and with regard to specific components. This group included the following California-based educators:

Mr. Lorenzo Dall'Armi
Superintendent, Santa Barbara
County Superintendent of Schools

Mr. Norman Brekke
Assistant Superintendent, Oxnard
Elementary School District

Mrs. Jeanette Enriquez
Teacher, Oxnard Elementary School District

Mrs. Susan Flores
Director, Bilingual/Bicultural Program
Santa Barbara County Schools

Mr. Davis James
Teacher, Santa Paula Elementary School District

Mrs. Marilyn Mason
Program Developer, Santa Paula
Elementary School District

Mr. Domingo Martinez
Principal, Oxnard Elementary School District

Miss Virginia Oaxaca
Administrative Assistant,
Oxnard Elementary School District

Mr. Elizear Ruiz
Director of Child Welfare and Attendance,
Santa Barbara County Superintendent of Schools

Mr. William Schoenbach
Principal, Ventura Unified School District

6) Revise design and prepare final report on Triangle Model: based on further review, analysis, design, and incorporating the feedback of the school reviewers, adjustments were made in the preliminary design to yield a final design for the Model, pending still further feedback as this report is disseminated. This final model is incorporated as part II of this report of the Triangle Program Planning Project.

D) ORGANIZING IDEAS

Conceptualization of the Triangle Model was guided by the following organizing ideas, which were derived from review and analysis of the inputs provided by consultant papers. These organizing ideas constitute major criteria and standards against which specifications of the Model could be judged. They are in effect a pattern or basic information-knowledge base which influenced the development of the Model. Each is described briefly below:

1) Individualized, competency-based objectives: to deal effectively with children who need so much help, it is necessary to treat them as individuals even though as a group they will have much in common. The need to deal with children who are at different entry levels of math skill, as well as language and reading ability, requires that objectives be based on individual student performance, and not group or other artificial norms.

Through competency-based objectives, children could be properly diagnosed and evaluated as they demonstrated ability to perform. The notion is consistent with a trend toward evaluation of competency in education generally, and especially as it facilitates the integration of goal-setting, learning activities, materials planning, and assessment.

2) Developmental areas are interactive: key skill areas such as mathematics ought not to be learned in isolation from the rest of the curriculum. It is especially important that while the student is building competency in math that opportunities for development in associated areas like language and reading are also utilized. Thus the objectives ought to be formulated not only in the prime area of curricular focus, which here is mathematics, but also in such auxiliary areas as affect interactively the child's development in a general sense. Although this is generally desirable for all children, it will become clear that the Mexican-American student is at a far greater disadvantage than his Anglo classmates when the curriculum is fragmented.

3) Personal growth and development underlies all other performance: personal development is as important or perhaps even more important than the acquisition of subject skill. It underlies all school performance. For example, without a strong self-concept and other personality attributes the child is in no position to learn and it will matter little what skill objectives are formulated for him. Personal development affects the learning of all children, but it is especially important to focus on it for the bilingual/bicultural child since many of his problems in the English-based schools derive from deep personal circumstances of alienation, confusion, and an inability to resolve many conflicts between his native heritage/community customs and the larger, stranger world in which he finds himself. Consideration of the learning styles of the Mexican-American student will also emphasize the significance of personal development as it affects classroom life and individual work.

4) Cultural patterns especially influential in the bilingual/bicultural setting: this is actually an extension of the previous point about personal development, to say that there are broader cultural and community characteristics which also have impact on schooling. We take these for granted in the majority culture, and Anglo children attend schools usually without great disparity between cultural patterns of school and home and community.

For the Mexican-American child, however, this is not the case. The cultural patterns of his home and community life are often at odds with the prevailing patterns of the school, thus it is important for the Triangle Model to be formulated in such a way as to recognize and legitimize those cultural patterns.

PART TWO

THE TRIANGLE MODEL

Chapter 3: Introduction to the Triangle Model

Chapter 4: Cultural Patterns

Chapter 5: The Learner Subsystem

Chapter 6: The Instruction Subsystem

Chapter 7: The Support Subsystem

Chapter 8: Summary and Recommendations

CHAPTER THREE

INTRODUCTION TO THE TRIANGLE MODEL

A) Structure

1) Information/knowledge base
2) Subsystems: learner, instructional, support

B) Features of the Model

1) Responsiveness
2) Uniqueness

C) Delimitations

1) Level of generality
2) Presumes capability for various general functions
3) Information/knowledge base an exemplar
4) Limited population

D) Definition of Terms

1) Systems terms: model
   subsystem
   exemplar

2) Contextual terms: bilingual/bicultural
   Mexican-American
   majority culture

A) STRUCTURE

The Triangle Model provides guidelines for a school district interested in bilingual/bicultural education to develop a program to improve the achievement of Mexican-American students from grades K-6 in the areas of mathematics, reading, language, and personal development. The Triangle Model consists of the following major components:

1) Information/Knowledge Base: since the utility of the Model is purported to be the application of relevant ideas regarding bilingual/bicultural education to the particular developmental areas designated, it is necessary to develop an information/knowledge base from which various program components can be created. This information/knowledge base is constantly expanding; in fact, it is the sum total of information about the entire field. Obviously we cannot summarize that in the model, but provide an exemplar of the types of variables which a district ought to consider. Five major variables ("cultural patterns") that constitute in themselves a spectrum of relevant information/knowledge have been selected, as a point of departure for considering some of the many relevant issues and factors impinging upon the bilingual/bicultural classroom.

2) The Subsystems: the name "Triangle" is derived from the description of the three subsystems which make up the core of the Model. These subsystems constitute a framework, a matrix, a systematic network or structure for describing the Model. They provide a manageable blueprint for developing program components.

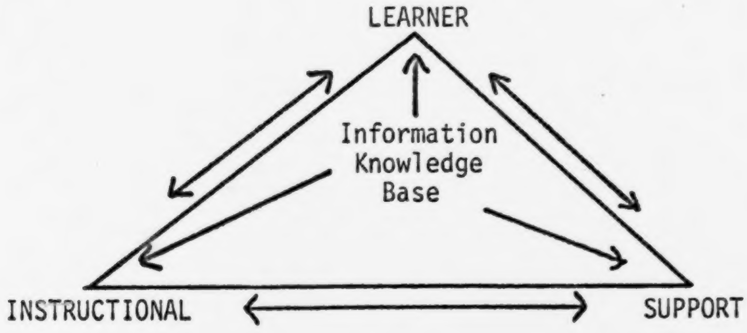
The Model includes the following subsystems:

Learner Subsystem: guidelines regarding the development of competency-based objectives in various developmental areas for the students, as well as for learning activities which lead to the acquisition of those competencies, and instructional support materials required to support those activities. This subsystem also includes descriptions of the evaluation component for student performance.

Instructional Subsystem: guidelines regarding the development of competency-based teacher objectives of both a personal and professional variety, and the instructional strategies with which these competencies enable a teacher or paraprofessional to facilitate the attainment of student objectives. The subsystem also includes guidelines for an in-service training program and evaluation component.

Support Subsystem: guidelines regarding the development of support components such as the role of administrators and other schoolpeople, parents and the community.

The three subsystems are represented graphically as the "Triangle Model" as follows:



B) FEATURES OF THE MODEL

1) Responsiveness: the Model attempts to bring together some concepts of bilingual/bicultural education with a systematic consideration of various aspects of program development, much needed now in bilingual/bicultural education. It does not claim to be the only way in which this general field can be improved and expanded, but just one mode which could be explored. The field is now receiving some long overdue support; there has been and is likely to continue to be a rush to install programs. Some of these might lack for comprehensiveness and quality due to inadequate planning. Our interest here is in proceeding with the planning of a program in basic skills through a systematic and careful procedure which taps the most up-to-date thinking in bilingual/bicultural education and curriculum development.

2) Uniqueness: Although there is a large amount of literature on bilingual/bicultural education which is growing all the time, the information/knowledge base on which previous programs have been developed has more or less remained implicit and not directly explicated as part of curriculum planning. These were general considerations that may often have been in the mind and experience of the program developer, consultant, or teacher.

The Triangle Model articulates these considerations; there is an explicit role for the information/knowledge items which may be applicable. These are to provide a set of standards or criteria for development of the program components. This may be the first time that a model both clearly identifies those cultural patterns and synthesizes those cultural patterns which might have bearing on the bilingual/bicultural setting as an integral part of the program development effort. By application of the cultural patterns to the components of the three subsystems, the model uniquely provides an informed and flexible frame of reference for curriculum and program developers.

C) DELIMITATIONS

It is also important to say what the Model does not intend to do, so that no one will misunderstand the scope of its application. The Model seems intrinsically ambitious, but neither it nor any other single model or program will solve all of the problems in the area of bilingual/bicultural education. But it could be useful if it can offer a few successful strategies, subject to the following constraints:

1) Level of generality: the Model does not provide a detailed prescription for every aspect of a Triangle Program. The consultant's inputs made it clear that any one of the variables under consideration in this Model might vary from one community to another. Local circumstances will determine the degree of applicability of various aspects of the Model. For example, the degree of commitment to bilingualism in a particular community might determine whether the Anglo-children in a class might also be required to learn Spanish as their classmates learn English.

2) Presumes capability for various general functions: a district is presumed to possess a capability for various standard curriculum and

program development functions, such as goal setting, materials development, and teacher training. The purpose of the Triangle Model is not to prescribe how to write behavioral objectives, nor to determine the sequence of activities for materials development, or to reiterate the many possibilities for organizing workshops, weekend retreats, or afternoon sessions of in-service sessions training.

What the Model does say is this: given a capability for goal-setting, teacher training, materials development, and other administrative and management functions, there are certain considerations, specifications, and criteria for a mathematics and associated skills program in an elementary level bilingual/bicultural school setting.

3) Information/knowledge base an exemplar: it would be literally impossible to provide the entire body of information and knowledge which could be applicable to a bilingual/bicultural program within this report. In fact, only that part of it reported in the data from the consultants could even be considered for selection as part of the exemplary section included in this Model. There are many other possible issues than those mentioned here, and these will continue to expand as additional research and thinking are completed and become part of the information/knowledge base for bilingual/bicultural education.

What the Model does is try to indicate the type of issue which does have relevance for program and curriculum development in bilingual/bicultural education. The five major variables and subvariables discussed in the next chapter represent a primary spectrum of considerations which ought to be included. These are only exemplars, as are the actual objectives and other examples in the model. They depend entirely upon the particular group of consultants whose inputs were analyzed for pertinent information; from each of them undoubtedly only a small part of what they could offer to an information/knowledge base found its way into their papers.

4) Limited Population: although the larger problem area of bilingual/bicultural education obviously includes any child whose native language and cultural background is different from that of the majority culture, our focus here is generally on Spanish-speaking students, and more particularly upon the Mexican-American child. It facilitates the development of a Model to be able to focus consistently upon a single population group. Also, the resources available for consultant input in this planning project dictated that we build the Model with Mexican-Americans as the exemplary group.

It must be emphasized strongly that we say about the Mexican-American student should have application as well to other Spanish-speaking groups, such as the Puerto Rican-American, and the Cuban-American, and others. Our intention is to say something about education in the bilingual/bicultural setting for a variety of Spanish-American communities (and perhaps even for other ethnic and national groups ultimately). To facilitate this we have focused on the Mexican-American as a sample population from which larger generalizations could be made.

D) DEFINITION OF TERMS

1) Systems terms:

a) Model: a pattern or structure providing a basic framework for curriculum and program development, including identification of major components, specifications, and generalizations constituting standards or criteria for an educational system.

b) Subsystem: subordinate system of an educational system or model, which identifies some particular significant component area of the overall scheme or plan (model).

c) Exemplar: an instance or typical example, provided to illustrate a general point, or to indicate the nature of a representative case. Actually, the exemplar is not just any instance, but a case selected for its particular goodness and suitability. It is an example of high quality.

2) Contextual terms:

a) Bilingual/bicultural education: educational process which uses a pupil's primary language as the principal mode of instruction while at the same time systematically teaching him the language of the predominant culture. The effort is to make the student bilingual through conceptualizing in the language best known to him. To the extent that it is feasible, bilingual/bicultural education also purports to take into consideration the cultural patterns which affect learning over and above the language problem.

b) Mexican-American: students whose primary language is Spanish and whose primary cultural background is Mexican.

c) Majority culture: although there are communities and schools where the Mexican-American may actually be in the numerical majority, the term as used in this report refers to the larger culture in which Mexican-Americans in the United States find themselves, the predominantly English-speaking culture and English language based schools and communities.

CHAPTER FOUR

CULTURAL PATTERNS

A) The Mexican-American Culture

   1) The "Mexican-American"

   2) The "Extended Family"

   3) Sex differentiation

B) Bilingualism

C) Relationship to the Majority Culture

   1) Reactions to the American "core culture"

   2) Modes of Bilingual Education

D) Cultural Democracy

E) Field Dependence and Field Independence

Introduction

"Cultural Patterns" refers to those variables which ought to be taken into consideration in planning a bilingual/bicultural program in order to facilitate the design of appropriate goals, instructional strategies, materials, assessment procedures, and other program dimensions. Taken together these constitute an information/knowledge base providing a set of standards or criteria against which the adequacy of various program components can be measured.

The description of _all_ research facts and other information relevant to the bilingual/bicultural classroom is beyond the scope of this or any single project, and the potential size and complexity of that information/knowledge base increases steadily as more attention is turned to bilingual/bicultural education. In the following pages we indicate some exemplary variables or issues we believe have significant bearing on the design of educational programs. Nor are the five variables and sub-issues represented here comprehensively treated, for the point of the Model is to indicate:

1) that it is the very application of _some_ information/knowledge base that is important to program planning;

2) that the information/knowledge base will vary from one community to another depending upon such factors as the current state of organization of knowledge in the field, accessibility to information systems, degree and extent of information search, and selection criteria used to determine what is the most "relevant" information/knowledge.

A) THE MEXICAN-AMERICAN CULTURE

1) The Mexican-American: the classification, Mexican-American, is extremely broad, including peoples who are almost as varied as the American population itself. Within the group are included all peoples of Hispanic descent, regardless of whether they originated in Spain, Mexico or South America. Some have been residents of the United States since before the nation was formed; others have immigrated within the last few years or perhaps slipped across the border illegally within the last century. Many ethnic variations are included within the Mexican-American Community--from the pure-blooded Castilians to the pure-blooded descendants of the indigenous Indian population. The largest percentage, however, is represented by a combination of these two elements--the Mestizo. There is not only diversity ethnically but also socially, economically and culturally. Some of the descendants of Spanish "first families" of the Southwest are in every respect "first families" of the nation. At the other extreme are the impoverished, illiterate migrant workers--illegal or legal--who form the manual backbone of the agricultural production of such states as California, Arizona, New Mexico, and Texas.

Between these extremes exist the numerous first-, second- and third-generation Mexican-Americans who reside within the metropolitan areas but who remain culturally apart from Anglo-America. It is for the children of these families that this Model is oriented, children who literally grow up in two different worlds: the Spanish-speaking, Hispanic culture of their homes and the English-speaking, Anglo culture of the schools. Herschel T. Manuel observes the following:

> "The meeting of Spanish-speaking and English-speaking people in the Southwest has brought two historical cultures into contact and, insofar as they are different, into conflict. To assess properly the meaning of this conflict, we may start with three or four generalizations. First, the underlying culture of a people is the product of a long past. Second, the culture of a people changes at varying rates as a result of forces within the group and of contacts with other cultures. Third, cultures which develop in isolation from each other and in different environments tend to diverge in important respects--in language, for example--and cultures in contact tend to develop common elements. Finally, when two peoples are brought together geographically, cultural differences tend to keep them apart and cultural likenesses to bring them together."[1]

Throughout the past and down to the present day, there has been antagonism, animosity, and covert hostility between the Mexican-Americans and the Anglo-Americans within the United States. Much of the hostility has arisen because of the different value orientations of these two groups. Julian Samora finds the socio-cultural traditions of the Mexican-American to include "a disdain for change, clinging to tradition; fatalism and defeatism; emphasis on being, not doing; geographic isolation; strong familism and kinship ties with the community; lack of formal education; patron system of personal relations in government and the economy; passive role in the society; strong religiosity; rural backgrounds." In contrast, the Anglo-American idealizes "hard work; individual effort; humanitarianism; freedom; efficiency and practicality;

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[1] Herschel T. Manuel, Spanish-Speaking Children of the Southwest: Their Education and Public Welfare. Austin: Univ. of Texas Press, 1967.

formal education; science and secular rationality; social mobility; geographic mobility."[1]

2) The extended family: in the culture of Mexico, the family is of paramount importance. Social roles are determined by a defined family structure where responsibility and initiative are very definitely a matter of age and status. Important class differences probably exist within the general Mexican type in the Southwest; however, some main elements survive even in the urban-Anglo setting where large numbers of Mexican-Americans reside.

The Mexican-American family is especially characterized by its size and coherence. The "extended family" of the typical Mexican-American includes three or four generations of grandparents, aunts, uncles, and cousins--many of whom may be living within the same household. Although the kinship ties are considered to be "extended" by American standards, these relatives are received as part of the immediate family by the Mexican-American.

In addition to the "blood relatives," another group, the compadrazco, is also included within the extended family. The compadrazco is a pseudo-kinship institution which includes godparents or Padrinos who are chosen for many different occasions such as for the reception of religious sacraments such as Baptism, Confirmation, and Matrimony. As members of the extended family, the "Padrinos" are ready to lend a helping hand should any misfortune befall the family or one of its members. Commenting on this institution, Ralph Beals states: "Possibly nowhere in the Latin-Catholic world has the godparent relationship been so elaborated as in Mexico. Not only does the child treat his godparents like true parents, but parents and godparents (compadres) treat each other alike, and are often closer than, true siblings. The compadrazco is an elaborate system that extends kinship to a large number of unrelated individuals."[1]

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[1] Julian Samora, The Spanish-Speaking People in the United States: A Pilot Study Prepared for the Civil Rights Commission. Washington, D.C.: The Civil Rights Commission, 1969.

Armando Rodriquez states that the child "is raised to look after his parents and to made sacrifices for them . . . Independence of the children is not always considered to be a good thing. The family takes first place, before the individual, and therefore, before the community or organizational responsibilities. This kind of family organization permits an individual to feel quite secure and sufficient within his family group. There is less need to become involved actively in community and civic affairs as a way of satisfying the need for social participation and personal achievement."[2]

3) Sex Differentiation: the roles of the individual members are clearly stated by Sister Mary Immaculate in the following manner:

> The roles of individual members of the Mexican-American family are distinct and well-defined in contrast with the changing, overlapping tendencies in American families. Mexican culture is characterized by male dominance. The

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[1] Ralph Beals and Norman Humphrey, No Frontier to Learning: The Mexican Student in the United States. Minnesota: Univ. of Minnesota Press, 1967.

[2] Armando Rodriguez, The Mexican-American in San Diego. San Diego, Calif.: San Diego Unified School District, 1966.

> father wields almost unlimited power within the home. His word is usually law and he is obeyed unquestionably by his wife and children, especially the girls . . . The Mexican man will rarely assist his wife with household chores and care of the children. This, in his estimation, is the woman's duty and it would be a lowering of his status to perform such tasks. Neither will he permit his sons to engage in such household tasks, and thus, they grow up with the attitude that all work of a domestic nature must be performed only by the mother and daughters . . .
>
> In contrast to the male, the female role in the Mexican-American is characterized by its subordinate position. The Mexican woman . . . is expected to be submissive, faithful, devoted and respectful to her husband and to take the major responsibility for rearing the children . . . She is not expected to find fault with her husband or to be curious or jealous of what he does outside the home nor is she supposed to share in his political, economic or social activities unless they are centered around the home.[1]

Sister Mary Immaculate also explains the differentiated roles of children in the Mexican-American home: the boys are trained for the world, the girls for the home. "Girls are not expected to have as much education as boys and they are supposed to be far less experienced in the ways of the world. In early childhood, Mexican children play together freely and with very little supervision from adults. From about the age of eight, however, sex segregation is quite well-formalized. At the budding of adolescence girls are increasingly more sheltered in their activities while boys are permitted more freedom."[2]

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[1] Sister Mary Immaculate, Mexican Cultural Patterns. New York: G.P. Putnam, 1966.

[2] Ibid.

B) BILINGUALISM

One of the great problems facing the linguistically and culturally different in this country is the fact that education has been most accessible to the English-speaking person. The non-English speaker in the United States has always been "free to better himself" by becoming educated in the Anglo-American culture, simultaneously depreciating or forfeiting his own cultural heritage.

Essentially, bilingual/bicultural education implies the acceptance of the culturally pluralistic nature of American society, and the role of cultural plurality as a positive factor in education. Bilingual/bicultural instruction provides the linguistically and culturally different student with an early opportunity to experience academic success in a familiar language.

The literature indicates that there is a division of opinion concerning the extent and purpose of the use of language among proponents of bilingual education. In one camp are those who propose that bilingual education programs should not strive toward goals of fluency and literacy in both languages with opportunities throughout the curriculum for the continued improved mastery of each. This point of view is basically interested only in arriving at a satisfactory stage of "English Monolingual Educational Normalcy" just as soon as is feasible without injuring the pupil or arousing the community. "English As A Second Language" classes comprise the thrust of the curriculum.

An opposing view is held by those who propose that bilingual education means full bilingualism. In this kind of program, students are to develop all skills in both languages in all domains. Typically, both languages are used as media of instruction for all subjects. Clearly, this program is directed at heightened language maintenance (continuing oral and literacy skills in the primary language as well as English). These programs develop balanced competency and are believed to produce a more balanced bilingual society.

Other definitions fall somewhere in between the previous two mentioned. George Spache calls the word "bilingual" an abstract term used to describe a number of types of language skills. A bilingual pupil may be:

1. Fluent in his mother tongue and lack sufficient English to be able to communicate in that language, even though he can understand simple statements or directions in English.
2. Fluent in his mother tongue and also capable of sustaining ordinary, simple conversation in English, with effort.
3. Fluent in his mother tongue and also fluent in communication in practically all circumstances in English.
4. Not fluent in his mother tongue, nor in English. In other words, this pupil would be considered almost non-verbal in either language. He cannot listen to or speak either language with any real degree of fluency or correctness.

Bilingualism has also been defined as "a demonstrated ability to engage in communication via more than one language."

The State Department of Education of California has its definition as well: "Bilingual Education means the use of two languages, one of which is English, as mediums of instruction . . . 'Bilingualism' refers not only to two distinct patterns of 'linguistic habits' but also to distinct patterns of 'cultural habits' in all their anthropological meaning."[1]

The State Department of Education also defines other terms that are necessarily used while discussing bilingual education:

1. Children of Limited English-Speaking Ability - Children who come from environments where the dominant language is one other than English.

2. Dominant Language - With respect to a child, the language commonly used in the child's home or community.

3. High Concentration - A concentration of substantial numbers of children of limited English-speaking abilities from families with incomes below $3,000 per year or receiving payments under a program of aid to families with dependent children under a state plan approved under Title IV of the Social Security Act.

4. In-Service Training - Short-term or part-time training in the instruction of children of limited English-speaking ability for persons while participating as teachers, teacher-aides, or other ancillary education personnel in bilingual education programs in elementary, secondary, or technical schools.

5. Special Education Needs - Educational needs of or associated with children of limited English-speaking abilities.

Finally, what interests does bilingual/bicultural education serve? At the simplest level, bilingual competency makes it possible for children of Spanish-speaking ethnic groups to function effectively in at least two cultural spheres. Bilingual/bicultural education gives these children an opportunity to establish a sense of belonging to, and being valued by, the culture represented by the home and that represented by the prevailing standards and practices of the mainstream

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[1] California State Department of Education, Administrative Procedures for the Bilingual Act. Sacramento: California State Printing Office, 1968.

American Scene. Having overcome the limitations of being able to communicate in only one of these worlds, the bilingual child achieves cultural flexibility; he can operate comfortably and knowledgeably in markedly different social settings and incorporate this diversity into an unusually versatile identity.

Therefore, bilingual/bicultural education serves five positive purposes for the student and the school:

1. It reduces retardation of school performance through fostering the ability to learn with the mother tongue immediately.
2. It reinforces the relations of the school and the home through a common communication bond.
3. It projects the individual into an atmosphere of personal identification, self-worth, and achievement.
4. It gives the student a base for success in the field of work.
5. It preserves and enriches the cultural and human resources of a people.

C) RELATIONSHIP TO THE MAJORITY CULTURE

1) Reactions to the American "core culture": the manner in which an ethnic minority group reacts to the American core culture, English-based and primarily European-derived, will help determine the mode of bilingual/bicultural education which can be accepted by individual communities. Four major types of reactions are:

> Retentionism: this is the inclination of a minority group to retain unique values and behavior found within its culture. These attempts can be altered to a minimum (observing special holidays only) or preserved to a maximum degree (e.g., the Amish in Pennsylvania, the Mennonites, Doukhobors in Canada).

Separatism: a tendency not to interact with the American core culture. This is a reaction that promotes exclusiveness and separateness. This, too, exists in a variety of degrees.

Assimilation: this is the theory that works for the incorporation of the minority group into the core culture. It is promoted by fostering maximal interaction with the American core (e.g., English-only).

Biculturism: this is the orientation towards a maximally creative and positive involvement in the value behavior complex of both the minority and the core. Biculturism involves selection from both systems and a synthesis of the elements selected. Neither system dominates the other. This is a process that is continual and requires a willingness to work out the selection on a bit-by-bit basis.

We may also describe three historical directions that the "core culture" has taken through the years in dealing with minorities: (1) the Anglo-conformity theory: many of the founding fathers, including George Washington, promoted this adherence to the superiority of English language and culture (2) the melting-pot theory: promoted the "assimilation" of all ethnic groups into the core culture during the late 1800's and early 1900's (3) linguistic and cultural pluralism: this is the theory that includes the biculturism described above, and aims at extending the American core culture to include diversity of language and cultural background when talking about what constitutes an "American." A "good American" need not mean conform to the core, giving up one's heritage, traditions, language, but incorporate these into the core culture to make it richer and more democratic.

2) Modes of Bilingual Education: Dr. Joshua A. Fishman has identified four broad categories of bilingual education:

> "Type 1. Transitional Bilingualism. Such programs do not strive toward goals of fluency and literacy in both languages with opportunity throughout the curriculum for the continued improved mastery of each . . . . Such programs are basically interested only in . . . arriving at the stage of English monolingual educational normality just as soon as is feasible without injuring the pupil or arousing the community."
>
> "Type 2. Monoliterate Bilingualism. Programs of this type indicate goals of development in both languages for aural-oral skills, but do not concern themselves with literacy skills in the mother tongue. This type of program in intermediate between language shift and language maintenance (language shift refers to the goal of going from a language other than English to English only; language maintenance means continuing oral and literary skills in the primary language as well as English)."
>
> "Type 3. Partial Bilingualism. This kind of program seeks fluency and literacy in both languages, but literacy in the mother tongue is restricted to certain subject matter, most generally that related to the ethnic groups and its cultural heritage. This kind of program is clearly one of language maintenance coupled with a certain effort at culture maintenance."
>
> "Type 4. Full Bilingualism. In this kind of program, students are to develop all skills in both languages in all domains. Typically, both languages are used as media of instruction for all subjects (except in teaching the languages themselves). Clearly this program is directed at language maintenance and development of the minority language. Programs such as these enable us to examine the difference between developing balanced competency in individuals and producing a balanced bilingual society."[1]

The four different categories as described by Fishman lead directly to the six existing approaches to bilingual education:[2]

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[1] Joshua A. Fishman and John Lovas, "Bilingual Education in Sociolinguistic Perspective," TESOL Quarterly, Vol. 4, No. 3, September, 1970.

[2] California State Dept. of Education Bilingual/Bicultural Task Force Report, Sacramento, Calif., 1971.

1. Spanish-speaking children are totally immersed in an English program and are discouraged from speaking the language of their homes (their dominant language).

2. Oral Spanish is not taught, but its use is permitted (though not encouraged) where needed for English communication. The dominant language (the language the child speaks best) is changed as soon as possible.

3. Oral Spanish is encouraged as a communication vehicle to develop English literacy. Spanish oral communication is developed both for the child whose dominant (best) language is Spanish and for the English speaking child. All children are to achieve English literacy.

4. Reading and writing in Spanish are encouraged to some extent and oral Spanish is encouraged. Spanish is used to develop a minimum of Spanish literacy (reading, writing) in children whose dominant (best) language is Spanish. Spanish oral communication is developed both for the child whose dominant (best) language is Spanish, for the child who comes from a home where the dominant language is Spanish, and for the English speaking child. All students achieve literacy in English and some Spanish speaking students achieve a limited level of Spanish literacy.

5. Bilingual literacy is encouraged for a child whose dominant (best) language is Spanish and/or for a child who comes from a Spanish speaking home. Oral Spanish for English speaking children is actively developed. Spanish is used to develop total literacy (speaking, reading,

writing) for those children whose dominant (best) language is Spanish and/or for those who come from a home where the dominant language is Spanish. Oral Spanish is developed to a fluency level for the Spanish speaking child and to a communication level for the English speaking child. There is little concern if a child progresses faster in Spanish literacy than in English in the earliest years of instruction.

6. Spanish and English are used to develop literacy in two languages. Oral fluency is actively developed in two languages for all students who are capable.

Given the reality of the culturally pluralistic nature of American society and its reflection in the American school population, bilingual/bicultural education ought to become an integral part of American education from early childhood through the university, including instruction in the entire range of academic subjects in the child's first language. It thus provides a vehicle by which the concept of "equal educational opportunity" can be implemented.

D) CULTURAL DEMOCRACY

"Cultural democracy" refers in the broadest sense to the legal rights of an individual to be different while at the same time being a responsible member of a larger society. More specifically, it states that a person can be bilingual/bicultural and still be loyal to American ideals. It recognizes that the way a person communicates relates to others, seeks support, is influenced by acceptance and recognition, and acquires a distinctive learning style is a product of the value system of his home and community. Furthermore, cultural democracy implies that any educational environment which either ignored or rejects any of these behaviors is culturally undemocratic because it rejects a person's right (as guaranteed by the Civil Rights Act of 1964) to remain identified with the culture and language of his ethnic group.

> Cultural democracy requires that the school not make the choice for the child. A culturally democratic learning environment would be a setting where a Mexican-American child acquires knowledge about his own and the dominant culture; the learning, furthermore, is based on communication, human relational, incentive-motivational and cognitive styles which are culturally appropriate for that child. Cultural democracy, then, emphasizes that it is the educational system which must change to accommodate itself to the uniqueness of the child.[1]

The product of cultural democracy is biculturalism: the ability to function competently and comfortably in the culture represented by the child's family as well as the culture represented by the majority of Americans.

Cultural democracy should not be misunderstood as a plea for separating or breaking up groups of people. Cultural democracy refers to the idea that there are completely legitimate different ways of choosing what one prefers to do, how and when to do it, and different ways of making judgments about what people do and think. Just as people of different persuasion on any subject interpret events differently, so do different cultures or ethnic cultures prize different things. The important difference is that ethnic groups cannot compete with each other in the way that rivals or special-interest groups oppose each other for something both want but only one can have. While some kinds of competition are constructive, competition between ethnic groups usually builds up frustrations, suspicions, and even physical violence. It is our belief, then, that different cultures or ethnic groups must live alongside one another with respect and understanding for their differences. It is just as important that one group does not do anything that would keep any other group (especially minorities) from respecting and understanding itself.

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[1] Manuel Ramirez, Project for Development of Culturally Democratic Learning Environments. Riverside, Calif: Systems and Evaluation in Education, 1972.

E) FIELD DEPENDENCE AND FIELD INDEPENDENCE

"Field dependence" and "field independence" are conceptual handles for describing the predominant intellectual, psychological, and emotional orientation through which a child operates in his or her environment, especially in schools. These concepts have many implications for school achievement, and therefore also implications for changes in curriculum, teacher training, assessment practices, and other aspects of the bilingual/bicultural classroom.[1]

The application of these concepts to children's education must proceed with some caution. Like all generalizations, they admit of many gray areas between the blacks and whites. But these ideas are useful for creating an image of the predominant trend in children's intellectual, psychological, and emotional dispositions. They can help a curriculum developer, program planner, administrator, or teacher understand children's behavior and respond in a supportive and educational manner.

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[1] There obviously could be many different kinds of "conceptual handles" for describing children. The state of the art in bilingual/bicultural education is fairly new and thus still rather limited; "field dependence and field independence" are among the preeminent concepts nationally among Mexican-American education experts.

Field dependents have tendencies to exhibit the following characteristics:

1) Perform better on verbal tasks (such as storytelling) than on written tasks (such as intelligence tests).

2) Prefer concreteness to abstractness, objects with human or anthopomorphic quality rather than formal or abstract qualities.

3) Influenced heavily by authoritarian figures, and their indications of approval and disapproval.

4) Predilection for conforming behavior, adoption of group rather than individual norms.

Field independents are more likely to exhibit the following characteristics:

1) Perform well on analytic and visual-motor tasks, such as on intelligence tests.

2) Can comprehend abstractions, concepts not tied to a concrete, visible reality.

3) Prefer individual decision-making rather than group decisions or conforming to those of authority figures.

4) Do not necessarily require fantasy, humor, or human content in educational tasks.

The variable of field dependence-independence is also closely associated with culture through socialization practices of home and community. Cultures encouraging development of individual identities appear to be characterized by field independence in their members, whereas those which encourage a family identity or any other type of group identity are more likely to result in a field dependent cognitive style. Manuel Ramirez states:

> While the mainstream American is typically encouraged to establish an identity _independent_ of the family, the traditional Chicano is encouraged to always view himself as a part of his family. He is reared in an atmosphere which emphasizes the importance of inter-personal relationships and of the worth of the individual. He consequently develops great sensitivity to social cues and to the human environment in general.
>
> He comes from homes that stress other-directness: family members experience intense loyalty to each other, have a highly developed social sensitivity, and identify themselves as members of a group rather than as unique, separate individuals who retain their individuality while momentarily fulfilling the requirements of a social role.[1]

According to the advocates of cultural democracy, the learning style is determined in a large degree by the values of his cultural group as well as the parents' style of child rearing. The entire sequence from values to modes of learning is shown below:

Values and life-style of a cultural group → Mother's styles of teaching and child-rearing → Child's style of thinking, relating, and responding to incentives → Child's prefered mode of learning

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[1] Manuel Ramirez, _Project for Development of Culturally Democratic Learning Environments_. Riverside, Calif.: Systems and Evaluation in Education, 1972.

CHAPTER FIVE

THE LEARNER SUBSYSTEM

A) Introduction
  1) General Educational Philosophy
  2) General Goals and Objectives
  3) Bilingual/Bicultural Educational Philosophy

B) Student Goals and Objectives
  1) Introduction
  2) Mathematics
  3) Reading
  4) Language
  5) Personal Development
  6) Summary

C) Student Learning Experiences
  1) Activities in Mathematics and other areas
  2) Learning Materials

D) Student Evaluation
  1) Modes of Evaluation
  2) Phases of Evaluation
  3) Evaluation in the four areas

A) INTRODUCTION

1) General Educational Philosophy:

The ultimate starting point for determining program goals for children in schools is the general educational philosophy of a community. This is usually represented by a general policy statement of the local school board, or may be articulated by various special interest groups, in the press, or in a continuing dialogue which often accompanies the resolution of educational issues.

The general educational philosophy of a community is its point of view about education and about children. What hopes are held for the children of the community? Is there a particular view of the adult's role in schools which predominates? What connections are sought between schooling and community life? These and other issues will be addressed very differently from one place to the next, and the answers to none of them should be taken for granted.

Such a statement, articulated by the school board, ought to be derived from a consideration of the felt needs of the people: What is it that the public wants for its children? Thus needs assessment through a systematic, continuing process can provide a school board with an image of the expectations held by parents and others. The board ought to give direction and concreteness to those needs and interests in its development of a general educational philosophy. This philosophy serves as a frame of reference, a point of departure for the creation of educational institutions and programs. Change is facilitated by the existence of a firm foundation and set of standards against which the adequacy and desirability of new concepts can be measured.

2) General Goals and Objectives:

Once the major outlines of a general educational philosophy have been identified, a school board and district educators can begin to select general goals and objectives for their students. Goal-setting at this level might include the determination of learning priorities, of the significance of special programs like career education, of the place of controversial curriculum like sex education. These goals and objectives, codified in a statement to which all parents and children have access, spells out the commitment of the district to clear purposes, and thus facilitates the work of curriculum developers, teachers, and others whose choices of subject matter, instructional strategies, materials, assessment procedures, and other factors shape educational programs.

3) Bilingual/Bicultural Educational Philosophy:

If the felt needs and interests of the community elicit general educational goals which are favorable to a concept of bilingual/bicultural education, a district must then formulate clear specifications regarding the nature and extent of a program in that area. It is easy to give lip service to the idea of bilingualism and biculturalism, but more difficult to delineate a pattern of ideas upon which actual programs can be built.

It is essential that a community which faces the development of bilingual/bicultural programming take the time and trouble to clearly think through just what they want that to be. As was indicated earlier, in the outlining of several modes of bilingual education, such programs vary from one place to another, and the choice ought not to be a random or merely convenient one. In a nation of pluralistic ideas, what is sufficient for a child in one community may not be the best for another child in another place.

Once such a philosophy has been codified in goals and objectives, instructional programs can be developed or selected to meet the stated purposes, and teachers assigned responsibilities for implementing the program. These goals and objectives, as they are selected and developed from community to community, provide the framework for organizing student learning activities. Such bilingual/bicultural activities would then rest upon a clearly thought-through blueprint of purposes relating back to general school goals and the overall educational philosophy of the community.

B) STUDENT GOALS AND OBJECTIVES

1) Introduction:

The number of student objectives appearing in curriculum guides, textbooks, and other sources in education are so numerous that it is a major undertaking to survey them all or even to make a very comprehensive representative selection. An institution like the Center for the Study of Behavioral Objectives at U.C.L.A. is devoted entirely to information accumulation and exchange of objectives. The Center for the Study of Evaluation, also at U.C.L.A., has analyzed and evaluated existing educational systems in order to systematically construct a basic set of educational goals in various areas. Some school districts, like that of Ventura County (Calif.), have organized task forces to review programs from around the nation to distill available objectives and the activities and materials which support them.

The student performance objectives recommended by the Triangle Model on the following pages could provide a point of departure for planning a Triangle Program in a particular school district. They are described at two levels of generality: those for mathematics, which is the major subject focus of a Triangle Program, are stated at a very specific level of behavior; those objectives proposed for the auxiliary areas of reading, language, and personal development are stated in more general terms. None of these objectives are inflexible; local needs, resources, and intentions must control. A district could theoretically select any set of objectives or formulate their own, as long as the following conditions are met:

1) Objectives must be stated for each of the four developmental areas: mathematics, reading, language, and personal development.

2) The objectives must be competency-based, so that the desirable performance behaviors desired of students can be clearly stated. Competency-based objectives also lend themselves to individualization, since diagnosis, prescription of activities, and evaluation of each student is based upon their attainment of the behavioral objectives, and not upon artificial group tests or standards.

2) Mathematics:

The Triangle Model mathematics objectives for students are organized into eight categories. Within each of these distinctive areas of mathematics competency is a sequence of specific behaviors which are generally sequentially arranged from simple to more complex behaviors. These objectives represent a synthesis of the best and most updated series of mathematics objectives available.

The structure of the eight categories provides the curriculum developer with a number of choices:

1) Prescription of all the objectives in a category before moving on to another category; or,

2) Prescription of some objectives in each of the categories for various grade levels;

3) Prescription of student self-pacing as he moves through the categories, to facilitate individualization;

4) Prescription of some student choice in selecting which objectives in a category a student would like to tackle first.

The eight categories of elementary mathematics objectives are as follows:

a) Numeration/Place Value
b) Addition/Subtraction
c) Multiplication/Division
d) Fractions
e) Decimals
f) Measurement
g) Geometry
h) Special Topics

a) NUMERATION/PLACE VALUE

1. Recognizing same and different shapes and sizes
2. Selecting smaller and smallest, larger and largest objects
3. Counting numerals from 1 through 10
4. Counting a set of 1 through 10 objects
5. Identifying the empty set by the word zero
6. Reading numerals from 0 through 10
7. Selecting numbers 0 through 10 to match sets
8. Selecting or constructing sets to match numbers 0 through 10
9. Finding which of two sets is more or less, by one-to-one matching
10. Selecting or constructing sets that have one more or one less; sets to 10
11. Selecting the number that comes just before or just after a number, or between two numbers
12. Writing numerals 0 through 10 in order
13. Selecting greater and lesser numbers in pairs of numbers, 0 through 10
14. Arranging sets in order, least to greatest
15. Identifying number works for numerals 0 through 10
16. Ordering numbers from 1 through 10
17. Counting by ordinal numbers, first through tenth
18. Making groups of tens and ones
19. Constructing and selecting groups to match a number of tens and ones
20. Reading and writing numerals from 11 through 100
21. Writing two-digit numerals having a given number of tens and ones
22. Identifying place values for ones and tens
23. Writing numbers (through 100)

24. Writing numbers just before, just after, and between (through 100)
25. Comparing two or three numbers (through 100)
26. Counting by twos, fives and tens (through 100)
27. Writing number words for numerals 0 through 10
28. Reading and identifying number words through one hundred
29. Ordering 3 or 4 non-consecutive numbers (through 100)
30. Writing numbers in expanded notation, using structured sets (through 999)
31. Identifying the ones, tens and hundreds place
32. Counting by ones and ordering in short sequences (through 999)
33. Reading and using the symbols =, ≠, ,
34. Ordering 3 or 4 non-consecutive numbers (through 999)
35. Identifying place values to thousands place
36. Writing, comparing, and ordering non-consecutive numbers (through 9999)
37. Counting by tens, hundreds, or thousands, starting with a multiple of 10 (through 9999)
38. Counting by twos, fives, tens, hundreds, or thousands, starting with any number (through 9999)
39. Identifying place values to millions place
40. Writing numbers greater than 10,000 in expanded notation
41. Counting by hundreds, thousands, ten-thousands, or hundred-thousands (through 999,999)
42. Writing words and numerals for numbers greater than 10,000
43. Comparing and ordering 4 or 5 non-consecutive numbers in the millions
44. Writing numbers in exponential form
45. Renaming a multiple of 10 as a whole number times a power of 10
46. Writing numbers in scientific notation
47. Writing whole and decimal numbers in expanded exponential form

48. Identifying numbers with base 5 numerals
49. Introducing exponent notation
50. Introducing negative numbers
51. Showing negative numbers on the number line
52. Adding and subtracting on the number line
53. Writing and counting through 89 with Roman Numerals
54. Writing and counting through 1000 with Roman Numerals
55. Identifying even and odd numbers; finding patterns in adding and subtracting even and odd numbers
56. Rounding numbers to nearest ten or hundred (through 999)
57. Rounding numbers to the nearest thousand or ten-thousand (through 99,999)

b) ADDITION/SUBTRACTION

1. Making sets equivalent
2. Making sets match a number
3. Adding and subtracting with pictured sets
4. Adding sets and numbers
5. Subtracting sets and numbers
6. Reading +, -, and =, finding sums and differences using pictured sets
7. Completing number sentences as shown by pictured sets
8. Completing addition and subtraction statements as number names for numbers
9. Adding and subtracting with number lines
10. Completing addition and subtraction sentences in number families
11. Writing = or ≠ in addition and subtraction statements
12. Adding three single-digit numbers using two groupings (associative property)

13. Adding two single-digit numbers; renaming and regrouping to make tens
14. Adding with and without number lines (sums to 18)
15. Subtracting using number lines (sums to 18)
16. Adding and subtracting two-digit and one-digit numbers, using expanded notation
17. Adding/subtracting with sums/differences in the next decade
18. Column addition, using regrouping of single digit numbers
19. Adding and subtracting families of tens and hundreds
20. Adding two and three-digit numbers using expanded notation
21. Subtracting two or three-digit numbers using expanded notation
22. Solving word problems
23. Adding and subtracting multiples of tens and hundreds
24. Adding two-digit numbers, with regrouping, using expanded notation
25. Adding two-digit numbers, with regrouping, using the algorithm
26. Subtracting two-digit numbers, with regrouping, using expanded notation
27. Subtracting two-digit numbers, with regrouping, using the algorithm
28. Adding three-digit numbers, with regrouping, using the algorithm
29. Subtracting the three-digit numbers, with regrouping, using the algorithm
30. Adding four-digit numbers, with regrouping, using the algorithm
31. Adding four or five-digit numbers
32. Subtracting four or five-digit numbers
33. Estimating sums and differences

c) MULTIPLICATION/DIVISION

1. Completing multiplication statements using sets
2. Completing division statements using sets

3. Relating multiplication and division facts
4. Completing multiplication statements using repeated addition
5. Completing multiplication statements without sets (through 5 x 5)
6. Dividing through 25 - 5
7. Solving word problems
8. Multiplying to 10 x 10, using sets
9. Dividing numbers 100 - 10, using sets
10. Multiplying through 10 x 10, without sets
11. Dividing through 100 - 10, without sets
12. Dividing with remainders in R form
13. Multiplying and dividing multiples of 10
14. Regrouping factors, using the associative property of multiplication
15. Simplifying multiplication, using the distributive property
16. Multiplying a one-digit number times a two-digit number using partial products
17. Multiplying a two-digit number times a one-digit number, using the algorithm
18. Multiply numbers of three or more digits, times a one-digit number, using the algorithm
19. Dividing by repeated subtraction and the ladder method (one-digit divisor, three-digit dividend)
20. Dividing using estimation
21. Dividing using estimation with remainders in R form.
22. Dividing using the algorithm
23. Writing division problems in fractional notation
24. Multiplying by multiples of 10, using the algorithm
25. Multiplying using the distributive property and partial products (two two-digit numbers)

26. Using the algorithm to multiply numbers of two or more digits
27. Dividing by a two or three-digit number, using estimation, without remainders
28. Dividing by a three-digit number, using estimation and fractional remainders
29. Writing the quotient as a mixed number in lowest terms

d) FRACTIONS

1. Identifying and constructing equal and unequal parts of figures
2. Identifying and naming regions divided into halves
3. Selecting and constructing sets divided in half
4. Using symbol 1/2
5. Identifying halves, thirds, and fourths of whole objects
6. Identifying sets divided into halves, thirds, and fourths
7. Dividing sets into halves, thirds, and fourths
8. Identifying and writing the fractions 1/2, 1/3, and 1/4
9. Identifying and comparing 1/2, 1/3 and 1/4 on the number line
10. Identifying multiples of 1/3 and 1/4 shown be sets and diagrams
11. Identifying 1/5, 1/6, 1/7, and 1/8 shown by sets and diagrams
12. Identifying multiples of 1/5, 1/6, 1/7, and 1/8.
13. Identifying the numerator and denominator
14. Identifying 1/10 and 1/100 and multiples of 1/10 and 1/100
15. Identifying fractions equal to 1
16. Locating various fractions on the number line
17. Writing equivalent fractions, using diagrams and number line (denominators through 10)
18. Comparing fractions with the same denominator, without diagrams

19. Adding and subtracting fractions with the same denominators using diagrams and number lines

20. Adding and subtracting fractions with the same denominators, without diagrams

21. Identifying fractions greater than 1 using diagrams and number lines

22. Identifying and renaming proper and improper fractions, using diagrams

23. Writing equivalents for simple improper fractions and mixed numbers, without diagrams

24. Comparing simple mixed numbers and proper fractions

25. Finding fractional parts of whole numbers

26. Writing equivalent fractions less than 1, using the algorithm

27. Reducing fractions, using the greatest common factor

28. Finding the least common multiple and least common denominator (LCD)

29. Renaming and ordering fractions, using LCD

30. Adding and subtracting proper fractions with unlike denominators

31. Multiplying fractions less than 1, using diagrams

32. Multiplying fractions less than 1 together and by whole numbers, using the algorithm

33. Renaming fractions greater than 1

34. Comparing and ordering fractions greater and less than 1

35. Adding three and four fractions with unlike denominators

36. Adding fractions greater than 1, using the algorithm

37. Subtracting fractions greater than 1, without regrouping

38. Subtracting fractions greater than 1, with regrouping, using the algorithm

39. Multiplying fractions greater and less than 1, using the algorithm

40. Multiplying fractions, using cancelling

41. Writing reciprocals of whole numbers and fractions

42. Dividing fractions less than 1, using reciprocals
43. Dividing fractions greater or less than 1, using the algorithm

e) DECIMALS

1. Renaming proper fractions (tenths and hundredths) as decimals
2. Writing decimals as fractions through hundredths
3. Identifying place values in decimal numbers (through hundredths)
4. Writing decimal numbers in expanded notation
5. Renaming fractions greater or less than 1 as decimals (through hundredths)
6. Renaming fractions greater than 1 as decimal numbers (through thousandths)
7. Identifying the place value of digits in decimal numbers
8. Writing decimal numbers in expanded notation (through thousandths)
9. Ordering decimal numbers (through thousandths)
10. Adding decimal numbers with regrouping (through hundredths)
11. Renaming fractions less than 1 as decimals (through hundred-thousandths)
12. Adding and subtracting two decimals (through hundred-thousandths)
13. Multiplying decimals (through hundredths)
14. Writing decimal equivalents for 1/2, 1/4, 1/5, 1/8, and their multiples
15. Multiplying decimal numbers (through thousandths)
16. Multiplying more complex decimal numbers (through thousandths)
17. Dividing decimal numbers by whole numbers
18. Dividing decimal numbers by decimal numbers
19. Finding quotient to specified number of decimal places

f) MEASUREMENT

1. Identifying longer, taller, or shorter; and fatter or thinner objects
2. Identifying longest, shortest, tallest, fattest, or thinnest objects
3. Identifying an object which is above or below a given object
4. Identifying the top or bottom of a given object
5. Identifying a container which is empty or full
6. Identifying two objects of equal length or width
7. Measuring length in non-standard units
8. Measuring liquid capacity in non-standard units
9. Putting a series of three events in order
10. Determining that 1 quart is equivalent to 2 pints and 2 cups equivalent to 1 pint
11. Using balance scales to identify object which is heavier or lighter
12. Identifying names and values of common United States coins
13. Stating equivalences among the coins
14. Matching the value of coins to pictured items which show costs
15. Reading clock to hourly time
16. Associating clock reading with events of the day
17. Identifying one foot as equivalent to 12 inches
18. Comparing lengths, heights, or widths of objects in feet and inches
19. Measuring objects in feet and inches
20. Measuring perimeters of closed curve
21. Recognizing that the length of a wire is not affected when the wire is cut into small pieces
22. Comparing volume of different containers

23. Identifying 1 pint as 2 cups, 1 quart as 2 pints or 4 cups, and 1 gallon as 4 quarts

24. Recognizing that weight of an object is not affected when the object's shape is transformed

25. Using balance scale to compare objects

26. Ordering objects according to weight

27. Stating the number of coins equivalent to a given price (up to $2.00)

28. Matching the values of sets of coins

29. Reading price of pictured item and determining coins equal to price

30. Identifying $1.00 bill and matching to sets to 10ths

31. Reading clocks to half and quarter hour

32. Dividing day into 24 hours, year into 4 seasons or 12 months

33. Estimating duration of time

34. Comparing temperatures in degrees Fahrenheit

35. Measuring length in yards

36. Translating from one unit of measure to another

37. Stating the number of non-standard units of area in a given region

38. Stating the number of non-standard units of volume in a given solid

39. Recognizing that the amount of liquid in a container remains unchanged when transferred to another container

40. Reading scale which measures weight in pounds

41. Identifying 1 pound as 16 ounces and 1 ton as 2,000 lbs.

42. Reading clock in minutes

43. Writing numeral notation for clock reading (3:25)

44. Dividing year into 365 days

45. Stating number of days in each month

46. Using measuring instruments to determine the number of centimeters in a length, and the number of inches in the same length

47. Transforming centimeters to meters

48. Comparing standard units of measure

49. Stating the equivalent for 1 mile in feet and yards

50. Measuring in meters and centimeters

51. Transforming within metric system

52. Stating greatest possible error for a given measurement

53. Measuring area in square inches (no formulas)

54. Measuring volume in cubic inches (no formulas)

55. Stating that the weather report is given in degrees Fahrenheit

56. Converting among the 3 temperature scales

57. Identifying 5-dollar and 10-dollar bills

58. Reading dollar sign and decimal point for value of an item

59. Computing the amount of change (to $10.00)

60. Comparing gram-kilogram system with ounce-pound system

61. Adding and subtracting with measures

62. Identifying years, decades, centuries

63. Recognizing that the volume of a solid is unchanged by the transformation of the solid

64. Computing average of a given set of numbers

65. Drawing bar and line graphs

66. Constructing table showing common equivalences of weight, length, time, and capacity

67. Changing money from United States currency to foreign currency

68. Learning how to measure the very small and very large

69. Writing time using A.M. and P.M.

70. Introducing all metric measures by means of prefix and root word
71. Comparing different units of measure
72. Stating equivalences between English and Metric systems of measure
73. Computing surface area of solids
74. Estimating area of non-regular closed curves
75. Computing mode, median, range, and average of a given set of data
76. Solving word problems using averages, rates, and various measure equivalences
77. Graphing a frequency distribution

g) GEOMETRY

1. Identifying open and closed curves and straight lines
2. Naming points that are inside, outside, and on closed curves
3. Identifying circles, rectangles, squares, and triangles
4. Exploring solid objects and finding flat surfaces on solid objects
5. Drawing rectangles, squares, and triangles
6. Identifying and naming line segments
7. Measuring line segments, using non-standard units
8. Measuring line segments with a ruler, identifying congruent line segments
9. Classifying polygons by the number of sides
10. Naming the parts of angles
11. Naming the angles of a polygon
12. Classifying solid geometric figures
13. Identifying parallel, intersecting, and perpendicular lines
14. Identifying congruent and right angles

15. Identifying right, isosceles, and equilateral triangles
16. Naming polygons by number of sides
17. Measuring to the nearest 1/2 inch
18. Introducing concept of symmetry through paper folding
19. Identifying lines of symmetry
20. Finding perimeters of polygons by adding the lengths of the sides
21. Computing perimeters of polygons, using formulas
22. Identifying certer, radius, and diameter of a circle
23. Naming the perimeter as circumference; comparing lengths of radius, diameter, and circumference
24. Drawing acute, right, and obtuse angles and triangles
25. Determining symmetry with respect to a line
26. Classifying prisms (number of faces, number of vertices, number of edges)
27. Measuring to the nearest 1/4 and 1/8 inch
28. Determining congruent line segments, using a compass
29. Identifying arc, chord, semicircle; drawing a circle with a compass
30. Measuring angles with a protractor
31. Drawing and identifying angles, using a protractor
32. Constructing congruent angles
33. Classifying triangles according to angles
34. Investigating two-dimensional figures according to size and shape
35. Developing the concept of congruency for two-dimensional figures
36. Naming corresponding parts of congruent triangles
37. Measuring areas in square units
38. Exploring symmetry by flips, turns, slides
39. Identifying symmetrical shapes

40. Finding areas of square and rectangular regions, using formulas
41. Finding areas of parallelogram regions and triangular regions
42. Finding the circumference and area of a circle
43. Finding the volumes of simple solids
44. Identifying parallel and intersecting planes
45. Naming congruent angles of parallel and intersecting lines
46. Computing the sum of the angles in a triangle
47. Constructing angle bisector and perpendiculars to a line
48. Stating properties of inscribed and central angles of a circle

h) SPECIAL TOPICS

1. Identifying equal sets, equivalent sets, subsets of a set, the universal set, and examples of the empty set
2. Constructing the union and intersection of two or more sets and the complement of a set
3. Performing set operations with sets of numbers
4. Performing set operations in geometry
5. Solving equations and inequalities; finding truth sets
6. Using number lines to find truth sets
7. Writing and interpreting ratios
8. Writing ratios in fractional notation; comparing ratios and rates
9. Solving equations with two placeholders; graphing the sets of ordered pairs
10. Graphing truth sets and intersections of equations and inequalities
11. Writing and solving proportion problems
12. Renaming decimals and fractions as percents and ratios
13. Solving problems using ratios, proportions, and percents

3) Reading:

Because a child is accustomed to hearing the sounds of his native language, it is appropriate that he be taught basic reading skills in that language. There are, as in mathematics, a number of programs with stated objectives which could serve as a basis for selection or invention of elementary reading objectives for the Triangle classroom. These may be found, for example, in popular texts for the elementary grade levels published by Macmillan, Harper & Row, Scott Foresman, Lippincott, and other companies in the field. In addition there are innumerable local curriculum guides of various school districts which formulated their own objectives.

One major effort to reduce the duplication of school districts in establishing major goals and objectives was that of "Project Coordination," organized in January 1971, in Ventura County, California. A task force in reading developed performance objectives after considering the goals of a wide number of programs from across the United States. These behavioral objectives were then cross-references to specific activities in a sampling of popular and basic reading texts, and to evaluation sections of the Cooperative Primary Test for Reading and the Comprehensive Test of Basic Skills, two nationally-used measures.

The Ventura County "Reading Objectives Handbook" contains an excellent representative selection of reading objectives for students at the elementary level. These are provided here as a Model of the scope and variety of objectives which ought to be an integral part of a bilingual/bicultural program. The objectives are organized in five major categories:

I) Word Attack Skills
II) Comprehension Skills
III) Interpretation Skills
IV) Reference and Study Skills
V) Reading Mechanics

I) WORD ATTACK SKILLS

A) can identify letters of the alphabet:

1. Given a list of manuscript letters, the student will orally identify each letter.
2. Given a list of cursive letters, the student will orally identify each letter.
3. Given a list of letters of the alphabet, the student will identify the vowels and the consonants.
4. Given a list of letters, the student will be able to alphabetize orally or by writing.

B) can identify rhyming words:

1. After listening to a group of words, some of which rhyme and some of which do not, the student will orally designate the rhyming and non-rhyming words.
2. After listening to a series of rhyming words, the student will state another rhyming word with the same sound pattern.
3. Given a simple poem, the student will listen and identify the words that rhyme.
4. Given a set of four pictures, the student will identify those illustrations which rhyme with one another.
5. Given a list of words, the student will identify those which rhyme.
6. Given a rhyming couplet with an incomplete last line and a group of words, the student will select the word which best completes the rhyme.

C) can recognize basic sight words:

1. Given a card holder and name cards, one of which is the pupil's name, the student will identify his own name card and place it in the card holder.

2. Given several sheets of colored paper and color words printed on flash cards, the student will match the color word with its corresponding sheet of paper.

3. Given picture-word cards, the student will quickly state the word which each picture portrays.

4. Given a group of familiar words printed individually, the student will identify those words by immediate recall.

5. Given words selected from a basic sight vocabulary list, the student will recognize any word after three seconds.

6. Given a list of words and a word read aloud from that list, the student will circle the word on the list identical to the word given orally.

D) uses proper verb endings:

1. Given a choice of verb endings: s, ed and ing, the student will use the correct ending in oral or written work.

E) can identify position of initial, final, or medial consonant sounds:

INITIAL SOUNDS

1. After listening to four words, three of which begin with the same consonant sound, the student will state the word having a different initial sound.

2. Given a specific letter and pictures of several objects, the student will identify those objects which begin with that letter.

3. Given a list of several letters, a child will be able to identify the correct beginning sound when a word is pronounced orally.

4. Given several pictures, the student will write the beginning consonant of the word represented in each illustration.

5. Given a familiar word and a list of consonants, the student will form new words by substituting each of the consonants for the initial one in the original word. The student will pronounce each newly formed word.

FINAL SOUNDS

1. Given orally a word ending in a consonant, and a written list of letters, the student will identify that final consonant on the list.

2. Given orally a word ending in a consonant and a written list of words, the student will locate the word in the list having the same final consonant.

3. Given a list of consonants and a picture of an object ending in a consonant, the student will select from the list the final consonant of the word depicted in the illustration.

MEDIAL SOUNDS

1. Given a written list of letters and a word orally, the student will identify its medial consonant on the list.

COMBINATIONS

1. Given a picture of an object having an initial or final consonant and a list of words, the student will select the words on the list which begin or end with the same consonant.

2. Given a consonant sound and a list of words containing that sound in the beginning, middle or end position the student will state the position of the consonant in each word.

3. Given two lists of words with corresponding initial and final consonants, the student will match those words having identical beginning and ending consonants.

4. Given orally a list of words containing the same consonant in the beginning, middle or end of each word, the student will identify the position of that consonant in every word.

F) can identify short vowel sounds:

1. Given one-syllable words having the short a vowel in the initial or medial position, the student will blend the sound patterns together to pronounce the words.

2. Given one-syllable words having the short e vowel in the initial or medial position, the student will blend the sound patterns together to pronounce the words.

3. Given one-syllable words having the short i vowel in the initial or medial position, the student will blend the sound patterns together to pronounce the words.

4. Given one-syllable words having the short _o_ vowel in the initial or medial position, the student will blend the sound patterns together to pronounce the words.

5. Given one-syllable words having the short _u_ vowel in the initial or medial position, the student will blend the sound patterns together to pronounce the words.

6. Given a word orally and a written list of vowels, the student will identify the short vowel heard in that word.

7. Given a row of pictures, the student will identify those having the same vowel sound as the first illustration.

8. Given pairs of words orally, the student will state whether the words in each pair have the same or a different short vowel sound.

9. Given a list of words, one of which contains a short vowel, the student will identify that word.

10. Given sentences, the student will identify the short vowel sounds appearing in all words.

11. Given a group of one-syllable words containing the CVCE (consonant-vowel-consonant-final _e_) configuration, the student will:
    a. Create a new word from each by removing the final _e_ and,
    b. Use that word by placing it in a sentence.

12. Given a list of words containing the _schwa_ sound, the student will identify each vowel having that sound.

G) can identify long vowel sounds:

1. Given words containing the long _a_ sound generated by different letter combinations, the student will pronounce each word correctly.

2. Given words containing the long _e_ sound generated by different letter combination, the student will pronounce each word correctly.

3. Given words containing the long _i_ sound generated by different letter combination, the student will pronounce each word correctly.

4. Given words containing the long _o_ sound made by different letter combinations, the student will pronounce each word.

5. Given words containing the long _u_ sound made by different letter combinations, the student will pronounce each word.

6. Given a group of one-syllable words having two vowels, one of which is the final e, the student will blend the sound patterns together to pronounce these words.

7. Given a group of one-syllable words having a vowel at the end of their open syllable, the student will blend the sound patterns together to pronounce each word. (blue, clue . . .)

8. Given an orally stated long vowel sound and a written list of words, only one of which contains the long vowel sound, the student will select that word.

9. Given a list of long vowel sounds and a set of words containing these vowels, the student will match each vowel sound with the word containing its written form.

10. Given a selected group of one-syllable words, the student will create new words containing the CVC (consonant-vowel-consonant) configuration by adding final e to each one, and use each word in a sentence. (pin - pine)

11. Given a list of words containing the variant sound of y, the student will identify those having the long sound of y and those with the short sound.

12. Given a list of words containing long vowels, the student will identify the long vowels in each word.

H) can identify initial and final blends or clusters:

1. Given a list of words having a consonant blend in the initial position, the student will pronounce each word.

2. Given a word orally beginning with a consonant blend, the student will write the blend.

3. Given a word and a list of blends, the student will identify the blend contained in the word.

4. Given a list of words and a consonant blend, the student will match that blend with the word containing the same blend.

5. Given orally a group of words beginning with the same initial blend, the student will state two other words having the same blend.

6. Given several pictures, the student will identify the illustration which depicts a word beginning with a consonant blend.

7. Given one-syllable words with the same consonant blend in the initial and/or final position, the student will pronounce those words.

8. Given a list of words and a three-letter consonant blend, the student will match that blend with the word containing the same blend.

9. Given rows of words, the student will identify the words in each row which contain the same initial three-letter consonant blend as the one given orally.

10. Given a word orally and a list of four other words, the student will identify the word on the list having the same initial three-letter consonant blend as the one given orally.

11. Given a list of words containing consonant blends, the student will identify the consonant blends in each word.

12. Given words with an initial or final consonant blend, the student will pronounce these words.
    a. Initial blends will include:
       dr, fr, bl, cl, fl, sc, sm, sp, cr, tr, br, st, gr, pl,
       sn, sl, sw, gl, sk, pr, str, spr
       tw
       squ
       dw, scr, shr, thr, spl
    b. Final consonants will include:
       -ft, -sk, -st, -sp, -ld, -rd, -rk, -nk, -nd, -ng, -nt, -rt

13. Given a series of sentences containing both beginning and ending consonant blends, the student will read each one orally without errors in pronunciation.

14. Given a paragraph missing a word and an underlined word beginning with a consonant blend, the student will select the word which completes the paragraph from three words beginning with the same blend.

I) can identify initial and final consonant digraphs:

1. Given a written list of digraphs and a word orally beginning with one of the digraphs, the student will identify the digraph which begins that word.

2. Given words containing the initial consonant digraphs: ch, sh, th (voiced), and wh, the student will pronounce these words.

3. Given words containing the final consonant digraphs: sh, ch, ck, and th, the student will pronounce these words.

4. Given several consonant digraphs and a corresponding group of words, the student will match each word with its respective initial digraph.

J) can identify special vowel sounds,digraphs, dipthongs:

1. Given a list of words having the vowel digraphs: au, aw, eu, oo (long and short sounds), and ow, the student will pronounce each word correctly.

2. Given a list of words containing vowel digraphs, the student will identify the vowel digraph in each one.

3. Given a list of words containing a single vowel followed by the letter r, the student will pronounce each word correctly.

4. Given words containing the long a sound generated by different letter combinations, the student will pronounce each word correctly.

5. Given words containing the long e sound generated by different letter combinations, the student will pronounce each word correctly.

6. Given words containing the long i sound generated by different letter combinations, the student will pronounce each word correctly. (pie)

7. Given words containing the long o sound generated by different letter combinations, the student will pronounce each word correctly.

8. Given words containing the long u sound generated by different letter combinations, the student will pronounce each word correctly.

9. Given words containing the vowel digraph ea, the student will identify that digraph in each one and pronounce the words.

10. Given a group of words, each containing the same vowel dipthong, ou, ow, oi, and oy, and a list of key words for the variant sounds of that dipthong, the student will categorize each word by dipthong sound according to its correct key word.

11. Given a group of words, each containing the same vowel dipthong, au, aw, ew, and ey, and a list of key words for the variant sounds of that dipthong, the student will categorize each word by dipthong sound according to its correct key word.

K) can identify the variant sounds of consonants:

1. Given a set of words containing irregular spellings of the f sound, the student will classify them into the spelling categories of f, ph, and gh.

2. Given a set of words containing the ck, qu, or c sound of the consonant k, the student will pronounce the words and classify them by spelling categories.

3. Given a set of words containing the consonant x with the sound of ks and gs, the student will pronounce each word and state which sound combination of x is heard in each one.

4. Given words containing the soft c sound in the initial, medial, or final position, the student will pronounce these words.

5. Given words containing the soft g sound in the initial, medial or final position, the student will pronounce these words.

6. Given a list of words containing qu with both the kw and k sounding, the student will pronounce each word.

7. Given a list of words containing a silent consonant, k, b, w, t, d, or gh, the student will identify the silent consonant and pronounce the word.

8. Given a list of words containing variant sounds and a set of sentences missing one word, the student will select the word from the list which completes each sentence.

L) uses proper plural forms:

1. Given a list of singular nounds whose plurals are formed by adding: s and es, the student will write their plurals.

2. Given a list of singular nounds ending in y, the student will write their plurals.

3. Given a list of singular nouns including those of unchangeable form, the student will write their plural form.

4. Given a list of singular nounds whose plurals take a different word form, the student will write their plural form.

5. Given words written in both the singular and plural form and a group of incomplete sentences, the student will insert the proper form of the word in the sentence.

6. Given a list of singular words ending in s, x, z, sh and ch, the student will write the plural form of each one.

7. Given a list of plural nouns, the student will write the singular form of each one.

8. Given a list of singular nouns, the student will write the plural form of each one and state the rule which applies.

M) can identify possessive forms:

1. Given the possessive form: 's and s', the student can recognize they show possession.

2. Given phrases in pairs, one of which shows possession, the student will identify the phrase containing possession.

3. Given a sentence the student will be able to show possession by adding an apostrophe where needed.

4. Given sentences in pairs, one illustrating singular possession and the other plural possession, the student will identify the proper placement of apostrophes in each one.

5. Given phrases containing variant possessive forms, the student will identify their correct possessive endings.

6. Given dictated sentences, which include both plurals and possessives, the student will punctuate each possessive correctly.

7. Given a set of sentences containing designated words in the incorrect possessive form, the student will write the correct form of those words.

8. Given a list of words, the student will write sentences using the possessive form of each word correctly.

N) can identify contractions:

1. Given a list of phrases, the student will write them as contractions and include their apostrophes.

2. Given a sentence, the student will demonstrate his ability to recognize a contraction by adding an apostrophe where it is needed.

3. Given a list of contractions, the student will pronounce each of the contractions and state the two base words from which it was built.

4. Given a set of sentences containing two omissions and a choice of two words, one pronoun and one contraction, the student will identify the correct word for each omission.

5. Given a set of sentences containing auxiliary verbs, the student will change each auxiliary verb form to the negative and write its contraction.

O) can identify compound words:

1. Given a list of compound words, the student will identify the two words used to form each one.

2. Given two lists, each of which are composed of one of the part of familiar two-part compound words, the student will match the word parts in order to re-form each compound word.

3. Given two lists of familiar words, the student will combine them to form compound words.

4. Given a list of familiar words and a set of incomplete sentences, the student will form compound words from the list to complete the sentences.

5. Given a list of compound words and a set of difinitions in random order, the student will identify the correct definition for each compound word.

6. Given sentences, some of which contain disjointed compound words, the student will identify each disjointed compound word.

P) can identify root words:

1. Given a list of familiar root words to which beginnings or endings have been added, the student will identify the root word.

2. Given a word containing a suffix and a sentence missing a word, the student will use the root of the given word to complete each sentence.

3. Given a list of words, each containing at least one prefix and suffix, the student will identify the root word.

4. Given a list of words, the student will divide each word into its prefix and root.

5. Given a list of words, the student will divide each word into its root and suffix.

6. Given a list of words containing a root and suffix in which the spelling of the root word has been changed by the addition of the suffix, the student will spell the root word of each.

7. Given a word and a definition of a new word which can be formed by adding an appropriate affix to the given word, the student will construct the word called for by the definition.

8. Given a set of words derived from one root word, the student will identify the root from which all are derived.

9. Given several root words, the student will build four words from each one.

Q) can identify and knows meaning of prefixes:

1. Given a list of words containing the prefixes a and be with several distractors, the student will identify each prefix.

2. Given a group of sentences, each containing an underlined segment, the student will substitute one familiar word with a prefix for the underlined part of the sentence. (. . . go back again . . . = return)

3. Given a list of prefixes and a set of prefix word definitions, the student will supply the prefix word having the same meaning as each definition by using the prefixes listed.

4. Given a sentence containing an underlined, incomplete root word and a list of prefixes, the student will choose that prefix from the list which completes the root word according to the sentence context. (. . . because the ___cline was so steep. = incline)

5. The student will identify prefixes with a given sentence. The prefixes to be included are: be, in, out, pre, re, un, super, en, semi, sub, ir, il, hemi, ob, fore, anti, dia, pro, vice, under, trans, dis, con, in, mis, de, bi, non, co, over, ad, inter, im, tres, ex, and a.

R) can identify and knows meaning of suffixes:

1. Given a sentence containing a word missing its suffix, and a choice of suffixes, the student will select the suffix which completes that word.

2. Given a sentence missing one word with a choice of two words containing suffixes, the student will identify which word best completes the sentence.

3. Given a group of words containing a specific variety of suffixes, the student will find the suffix in each word. The suffixes to be included are:
-dom, -hood, -ion, -ible, -ist, -ling, -some.

4. Given a set of root words and a selection of suffixes, both in random order, the student will match each root word with a suffix to form a set of new words.

5. Given a list of suffixes with their meanings and a list of root words, the student will add a suffix from the list to each root word and write the meaning of the newly formed word.

6. Given a list of sentences with words lacking a suffix, the student will write in the correct suffix.

7. Given one suffix and a list of verbs with variant endings, the student will change the verbs to nouns by altering the verb spelling and adding the suffix. (demonstrate + ion = demonstration)

8. Given a group of words containing a specific variety of suffixes, the student will find the suffix in each word. Suffixes to be included are:
-ance, -able, -ation, -ent, -ion, -ous, -th, -tion, -ure, -ward, -ence, -ship.

9. Given a group of words containing a specific variety of suffixes, the student will find the suffix in each word. The suffixes to be included are:
-al, -an, -ant, -ary, -ery, -escent, -fy, -ic, -ican, -ish, -ity, -ive, -ice, -ology.

10. Given a set of words all containing the same suffix, and a list of various meanings that this suffix can stand, the student will classify each word in the list in terms of the particular meaning supplied by the suffix.

S) can place stress on the proper syllable:

1. Given a list of words divided into two syllables, six of which have first syllable accents and several distractors, the student will identify those whose first syllable is accented.

2. Given a list of two syllable words, the student will identify their syllables and place an accent mark on each accented syllable.

3. Given a list of multi-syllable words, the student will divide the words into syllables and identify the accented ones.

T) know the rules governing syllabication:

1. Given a set of pictures depicting one or two syllable words, the student will identify the number of syllables in each.

2. Given a set of words containing one or more vowels, but only one vowel sound, the student will identify the number of vowels and syllables in each word.

3. Given a set of words containing two or more vowels, but only two vowel sounds, the student will identify the number of vowels and syllables in each word.

4. Given a list of two syllable words containing two medial consonants, the student will divide the words into their syllables.

5. Given a list of three or four syllable words, the student will divide each one into its syllables.

6. Given a list of syllabication rules and a set of multi-syllable words, the student will identify the accented syllable and syllabication principle of each one.

7. Given a list of words containing two to six syllables, the student will identify the number of syllables in each word.

II) COMPREHENSION SKILLS

A) can recognize word meanings:

1. Given a picture of a simple object, the student will state the word that the picture portrays.

2. Given a list of words and a picture representing one of them, the student will identify the word that names the key word.

3. Given a key word and a list of four other words, the student will choose the word that has the best meaning for the key word.

4. Given a list of words and a sentence missing one word, the student will select the word on the list which best completes the sentence.

5. Given a list of words, the student will match those which are synonyms.

6. Given pairs of words, the student will match those which are antonyms.

7. Given a dictionary and a list of six words, the student will locate their definitions and write a sentence using each word.

8. Given a list of words, the student will match those which are homonyms.

9. Given a word of multiple meanings, the student will state two or three meanings of the word.

B) can note details:

1. Given a tangible object, an illustration or a real experience, the student can identify its details.

2. Given a picture missing an obvious detail, the student will identify that detail.

3. After listening to a short story or rhyme, the student can identify its details.

4. Given a phrase or sentence, the student can recall its details.

5. Given a set of sentences and a question, the student will identify the sentence which answers the question.

6. Given a paragraph, the student will locate the sentence which answers a specific question.

7. Given a reading selection and a list of incomplete sentences based upon it, the student will complete each sentence by filling in the appropriate detail from the selection.

8. The student will demonstrate his ability to identify details by listing a given number of specific facts contained in a given selection.

C) can identify the main idea:

1. Given a simple illustration, the student can tell the main idea that is portrayed.

2. Given a series of pictures telling a story, the student will state the main ideas of the story in his own words.

3. After listening to a short story or rhyme, the student can state the main idea of what he has heard.

4. After listening to a given story without a title, the student will state a title which relates to the story's main ideas.

5. Given a picture with a list of sentences, the student will select the sentence which best describes the illustration.

6. Given a list of titles and a related paragraph, chapter, story, article or book, the student can identify the proper title.

7. Given a selection and a group of three statements, the student will select the statement that most closely describes the main idea of a given sentence.

8. After reading a paragraph, the student will make a statement giving its main idea.

9. Given a phrase, sentence, paragraph, chapter, story, article or book, the student can distinguish between main ideas and subordinate ideas.

10. After reading a poem, fable, myth, legend or other literary style, the student can identify the main idea.

11. Given a story or other type of selection, the child can summarize the selection.

12. Given a reading selection, the student can indicate that he follows the plot and can identify the climax.

13. Given a set of paragraphs, some of which are missing topic sentences, the student will identify the ones whose topic sentences are omitted.

14. Given a set of paragraphs, some of which are missing an opening or closing sentence, the student will identify which paragraphs are incomplete, and what the incomplete paragraph lacks.

15. Given a reading assignment, the student will demonstrate his retention of ideas by identifying the main ideas of that reading passage after a period of time has passed.

D) can determine logical sequence:

1. Given a set of objects or pictures, the student can duplicate a visual sequential pattern.

2. After listening to a sequence of letter or number patterns, the student can reproduce the pattern.

3. Given a sequence of directions, the student can follow them in the correct order.

4. After experiencing a situation the student can retell it with the events in a logical order.

5. After listening to the teacher tell a short story, the student can later place the events in a logical order.

6. Given a reading selection containing a sequence of events, the student can predict what will happen next.

7. Given a passage missing its conclusion, the student will write a logical outcome and list the reasons for its conclusion.

8. Given written, oral or visual media, the student can sequentialize ideas and events into their order of importance.

9. Given a list of phrases revealing a time sequence, the student will arrange them in chronological order.

III) INTERPRETATION SKILLS

A) can make inferences:

1. Given a picture, series of pictures, or a slection, the student can predict outcomes and supply ending.

2. Given a story title, the student will state an environment in which the story might logically occur.

3. Given a selection, the student can determine how characters look, feel and talk.

4. Given a selection describing an event, the student will state which of its sentences infers the results of that event.

5. Given a selection, the student can interpret the emotions, motives and probably behavior of various characters.

6. Given a selection, the student can recognize cause and effect relationships.

7. Given a selection, the student can recognize and react to humorous characterizations and situations.

8. Given a character and a situation, the student can demonstrate understanding of character traits through dramatization.

9. Given a simple proverb or maxim, the student can relate it to his own activities.

10. Given experience with proverbs or maxims, a student will be able to develop his own, relating them to what he has read.

11. Given a selection or statement such as: "a curt greeting," "The Cold War," the student can infer relationships between people, societies, and environments.

12. Given a selection, the student can make inferences and determine ramifications of tacit relationships and understandings.

B) can read critically:

1. Given a selection, the student can distinguish relevant from irrelevant information.

2. Given a selection, the student can recognize unstated assumptions.

3. Given a selection, the student can detect illogical thinking and discrepancies; can distinguish fact from fiction.

4. Given a selection, the student can compare points-of-view, plots, themes and moods.

5. Given a selection, the student can compare it with other selections and develop criteria for comparison.

6. Given a selection, the student recognizes and understands the author's point-of-view, bias and objective.

7. Given a slection, the student can distinguish among fact, opinion, hypothesis and value judgments.

8. Given a selection, the student can judge the accuracy of information on the basis of documentation, proof and specific references.

9. Given various media, the student can recognize persuasive devices and techniques used in advertising and propaganda.

C) can recognize literary devices:

1. Given various selections, the student recognizes the use of figurative language and non-literal statements.

2. Given various selections, the student can recognize literary genre, styles and settings.

3. Given several selections, the student can recognize stylistic similarities and differences.

4. Given various selections, the student can recognize literary structural devices; meter, alliteration, onomatopeia, use of mood, appeal to senses.

IV) REFERENCE AND STUDY SKILLS

A) can identify the parts of a book:

1. Given a book, the student will demonstrate his ability to use its table of contents by identifying on which pages a specific story begins and ends.

2. Given a book, the student will identify the parts: title, author, table of contents, stories, page numbers.

3. Given a book, they will identify and use the parts of a book: title, author, publisher, table of contents, index, glossary, chapters, topical headings.

4. Given a book containing a table of contents, the student will state the types of information it contains.

5. Given a textbook, the student will locate specific information listed within its table of contents.

6. Given a textbook, the student will use its index to locate specific information within the book.

7. Given a table of contents of a reading text, the student will demonstrate his comprehension of its organization of identifying the unit title of each section.

8. Given a topic and several book titles, the student will identify the one(s) whose contents would cover the topic.

9. Given a textbook and a list of words found within its glossary, the student will locate the glossary and list the definition it gives for each word.

10. Given a book with a title page, the student will locate that page and answer questions on the information it provides.

11. Given a book containing a table of contents, the student will demonstrate familiarity with the types of information it contains by answering questions on its content.

12. Given a book, the student will write its identifying characteristics in correct bibliographical form.

B) can use library skills efficiently:

1. In the library the student will demonstrate his knowledge of the important features of the library by identifying the book stacks, check in and check out places, card catalog, reference materials, fiction area, non-fiction area, special study areas.

2. Given a list of books, the student will locate each one in the card catalog of his own school library.

3. Given a list of books and a card catalog, the student will identify the type of card upon which each book is listed in the card catalog of the library.

4. Given a library card, the student will correctly check a book out of the school library by completing its library book card.

5. Given a selection of graded library books over a three-month period, the student will demonstrate self-confidence in his reading ability by choosing, of his own volition during free-reading time, selections which are within five months of his established reading level.

6. Given a list of topics, the student will identify their number of placement in any library according to the Dewey Decimal System or Library of Congress number.

7. Given a reading selection by the instructor, the student will quickly determine its general ideas, by adjusting his reading rate to skim the material within the given time limit.

8. Given several topics and the Reader's Guide to Periodical Literature, the student will locate at least two sources of information for each topic.

C) can use dictionary properly:

1. Given a picture dictionary, the student can locate words and their meanings.

2. Given a set of scrambled letters from a segment of the alphabet, the student will arrange them in alphabetical order.

3. Given a group of words with a variety of initial letters, the student will arrange them in alphabetical order.

4. Given a random list of words which contain the same first letter, the student will arrange the words in alphabetical order.

5. Given a group of words, including several that have the same initial letter, the student will arrange them in alphabetical order.

6. Given a random list of words whose first two letters are the same, the student will arrange them in alphabetical order.

7. Given a dictionary and a group of words, the student will identify in which quarter of the dictionary each word is located.

8. Given a list of words, the student will identify the dictionary guide words for each.

9. Given a dictionary and a list of six words, the student will locate their definitions and write a sentence using each word.

10. Given a dictionary and several sentences containing the same multi-meaning word in different contexts, the student will use the dictionary to identify the meaning of the word as used in each sentence.

11. Given a list of words characterized by possessing several meanings dependent upon pronunciation, the student will pronounce each word in such a way that all of the possible meanings are revealed.

12. Given a dictionary and a list of words, the students will locate each word and identify what its grammatical abbreviation represents.

13. Given a scrambled list of common diacritical markings and their names, the student will match each marking with its name and provide a sample word to illustrate each sound.

14. Given a list of the most common diacritical markings and their names, the student will list a sample word to illustrate the sound of each one.

15. Given a dictionary, the student will use the supplementary parts to locate specific information.

D) can use reference materials:

1. Given a reference, the student can identify and demonstrate the specific purpose for which it can be used.

2. Given a list of different references, the student will identify each and give the purpose of information found in it.

3. Given a reference and a list of topics, the student will locate each topic in the reference by using its alphabetical listing or volume number.

4. Given a reference, the student will locate specific topics by using the index.

5. Given a reference, the student can locate specific topics within it.

6. Given a reference, the student will locate specific information in it.

7. Given a specific topic, the student can locate the information in a reference and identify the guide words for the topic.

8. Given a reading selection of factual material, the student will identify its key words which may be used to locate additional information in any reference material.

9. Given any reference, the student will identify and/or give the purpose for its major sections.

10. Given any reference materials, the student will list their similarities and differences in writing style.

E) can use maps, globes, charts, graphs, and diagrams to gain information:

1. Given a room, the child can point out the different areas and identify what takes place in each.

2. Given the assignment of drawing a picture of a building, the student can locate the rooms in their relationship to each other and the yard area.

3. Given a map showing streets, a child can trace a route from one designated place to another.

4. Given an assignment of drawing a map of his block and cross streets on which his home is located the student will organize his layout with a N.E.S.W. orientation, mark the position of his house and name the streets.

5. Given a map and a set of questions, the student will answer the questions by using and interpreting the supplementary information supplied with the map. i.e., legend, grid, charts, topographic lines.

6. Given a globe, the student will interpret its configuration by answering specific questions on its content.

7. Given one or more graphs, charts, diagrams or time schedules, a student will identify the type.

8. Given one or more graphs, charts, diagrams or time schedules, a student will make comparisons by answering specific questions dealing with them.

9. Given one or more graphs, charts, diagrams or time schedules, a student will interpret the information by answering specific questions dealing with them.

F) can use data sources:

1. Given resource material, the student will demonstrate his ability to use skills in note-taking.

2. Given resource material, the student will demonstrate his ability to construct and use an outline.

3. Given resource material, the student will demonstrate his ability to summarize.

4. Given resource material, the student will demonstrate his ability to give a book review.

5. Given resource material, the student will demonstrate his ability to give a research report.

6. Given resource material, the student will demonstrate his ability to classify information.

V) READING MECHANICS

A) oral interpretation:

1. Given an oral reading situation, a student will read aloud with correct pronunciation and intonation.

2. Given an oral reading situation, a student will read aloud with feeling and expression.

3. Given an oral reading situation, a student will be able to comprehend what he has read.

4. Given an oral reading situation, a student will read so that others listen carefully and get the thought.

5. Given an oral reading situation, a student will be able to read for a specific purpose (i.e., information, entertainment).

6. Given an oral reading situation, a student will be free of any detrimental physical mannerisms (pointing, and head movements, etc.)

B) silent reading efficiency - speed of reading:

1. Given reading material, the student will read at a reasonable rate for the material and purpose.
2. Given reading material, the student will demonstrate appropriate continuous progress in increased reading speed.

C) silent reading efficiency - reading strategy:

1. Given a specific reading assignment, the student will demonstrate ability to read for details.
2. Given a reading assignment, the student will demonstrate ability to skim for the general impression.
3. Given a reading assignment, the student will demonstrate ability to skim for specific information.
4. Given a reading assignment, a student will demonstrate efficient eye-movement pattern.
5. Given a reading assignment, a student will be free of any detrimental physical reading habits. (i.e., pointing, lip movement, head movements, facial mannerism during the act of reading.)

4) Language:

In order to develop a Triangle Model which includes language objectives, we must consider two theories prevalent among experts in the field of language development. George Spache describes these two contrasting theories regarding the use of a non-standard English dialect among school children as the deficit theory and the difference theory. The "deficit theory" holds that variations in syntax, usage, pronunciation, and accent are to be taken as examples of language retardation. It also claims that dialect speakers lack good auditory discrimination because they cannot hear and reproduce some English sounds; that these language deficits are cumulative and therefore form a barrier to academic success. It assumes that the dialect-speaking child cannot succeed unless he learns to use standard English.

The "difference theory" experts insist that dialect is in fact a system of language, with its own syntax and grammatical rules, pronunciation and word order. Spache points out:

> The proponents of the difference theory point out that all languages whether dialect or standard are capable of conceptualization and the expression of all logical cognitive operations. In other words, regardless of the manner in which he may verbalize his procedures, the dialect-speaking child can think through all normal mathematical operations. Dialect, these experts say, is adequate as a communication system, for the child can certainly communicate with the adults of his community, and he can be understood by standard English speakers.
>
> The difference theory does not accept the claim that dialect is a hindrance to academic success. It attributes such failure not to dialect but to the conflict in value systems of the dialect-speaking child and the middle-class oriented school.

Spache concludes:

> If we accept the fact that dialect is not a hindrance to learning mathematics or any other school subject, the goals for language development of children in a Triangle Program will not include a primary emphasis upon teaching these pupils to use standard English in place of their dialect. Teachers will not convey to these children the sense of rejection which is present when their dialect is constantly corrected. One's own language is closely identified with one's self and correction or rejection of that language is tantamount to a rejection of the person.

Ramirez (Culturally Democratic, Page 5) firmly agrees with Spache when he states that however good or bad language may sound to people not familiar with it, children must be allowed to retain and develop their native dialect while at the same time trying to master standard English. Acquisition of expressive facility in the native language is therefore essential. Eventually the lack of this facility will result in inaccurate assessments of the child's progress in mathematics. Moreover, the expressive facility is basic to progressive development and acquisition of concepts or skills. For the ultimate objective of language development is flexibility in self-expression and thought.

For an exemplary set of language objectives for elementary-level students we return again to the Ventura County (Calif.) "Project Coordination," which has completed one of the most comprehensive reviews of instructional objectives of any school district in the United States. As with their reading objectives, the Ventura group again cross-referenced the objectives to activities as they appear in various standard language curriculum materials. These included texts by McGraw-Hill, Houghton-Mifflin, Follett Educational Corp., Westinghouse Learning Corp., Harper & Row, and Encyclopedia Britannica Press.

The language objectives are categorized in three major areas: Language, Composition, and Literature. A further distinction is made between the primary grades (1,2,3) and the intermediate grades (4,5,6).

I) LANGUAGE

Primary

A) The student will be able to develop the use of good listening habits:

1) Through oral reading situations, the student will be able to listen to the language of many authors.

2) After listening to stories, records, poems, films, etc., the student will demonstrate the ability to

- a) listen critically
- b) listen to increase sensitivity
- c) recall details
- d) listen for enjoyment

3) Given a three-part direction orally by the teacher, the student will repeat the directions and follow them in sequence.

4) Given a story containing a choice of words, the student will select the word which enhances the story.

5) Given a situation in which the student is a recipient of an oral communication, the student will demonstrate his understanding of his responsibilities.

6) The student will demonstrate his attention to a presentation by answering questions based on it.

7) Given an incomplete story, the student will predict outcomes and make inferences.

8) The student will be able to listen to tell by the intonation pattern whether an oral sentence expresses fear, anger, love, etc.

9) The student will be able to listen to interpret and analyze in order to recognize use of either testimonials, prestige symbols, repetition, or emotionally-charged words.

B) The student will be able to develop competency in oral expression:

1) The student will be able to sing and play singing games.

2) The student will be able to converse with others.

3) The student will be able to use social forms, i.e., make introductions and relay messages.

4) Given a poem appropriate to his grade level, the student will be able to read it aloud in accordance with prespecified criteria.

5) In giving an oral report on an assigned topic according to prespecified criteria, the student will be able to speak naturally, distinctly, with poise and expression (formally and informally).

6) The student will be able to speak in complete thoughts and orally explain to the class a process or subject of his choice.

7) The student will be able to give a summary of a selection in one sentence.

8) Given a story, the student will be able to describe the characters.

9) The student will be able to use correct English and words that appeal to peers.

10) Given a story to listen to, the student will recall and retell its events in sequence.

11) The student will be able to grow in speaking vocabulary.

12) The student will be able to dictate to the teacher a personal experience.

C) The student will be able to understand the history, structure and usage of our language:

1) The student will be able to demonstrate knowledge of word derivation, changes and development of language historical background dialectical differences.

2) The student will be able to demonstrate ability to use dictionary.

3) Given written stories, the student will be able to punctuate correctly.

4) Given several word groups, the student will be able to alphabetize.

5) The student will be able to demonstrate the ability to identify and understand subject and predicate.

6) The student will be able to identify beginning parts of speech--noun, verb, adjectives, pronoun, determiners.

7) The student will be able to differentiate between sentence and phrase.

8) The student will be able to demonstrate knowledge of the structure and function of phrases and clauses.

9) The student will be able to demonstrate a knowledge of transformations by being able to:
   a. Classify transformations according to function
   b. Perform the operations of rearranging
   c. Recognize occurrence of a transformation
   d. Generate transformations

10) Given several word groups, the child will be able to select correct compounds and generate his own.

11) Given sentences, the child will be able to determine a simple sentence by identifying the subject and predicate.

12) Given a list of words, the child will be able to choose the words that mean things.

13) Given the following sentence, "The winter days are sunless," the child will be able to identify the smallest unit of meaningful sound in the word, sunless.

14) Given the following list of words, I, you, he, she, it, we, they--the child will be able to choose the noun phrases for which it might stand in a sentence.

15) Given a set of kernel sentences, the child will identify and copy the verb in each sentence.

16) Given a set of kernel sentences with a noun and determiner functioning as the subject of each, the child will identify the noun and the determiner in each sentence.

17) Given a story printed on the chalkboard, the student will identify words needing capitalization and indicate the punctuation needed at the end of each sentence.

18) The student will be able to demonstrate a knowledge of inflectional and derivational endings.

D) The student will be able to develop competency in spelling:

1) The student will be able to demonstrate his knowledge of the relationship between sounds and letters.

2) The student will be able to show ability to proofread.

3) The student will be able to demonstrate the ability to take dictation of sentences or paragraphs.

4) The student will demonstrate the ability to use correct usage of words in everyday activities.

5) Given a list of words, the student will be able to identify words by the use of morpheme clues.

6) Given an unfamiliar word, the student will name and define the original word from which the given word was derived.

7) Given words or sentences, the student will identify structural similarities and other regularities of spelling patterns.

8) Given a set of kernel sentences, the student will be able to identify the subject of each sentence and indicate whether it is singular or plural.

9) The student will demonstrate his knowledge of rules for syllabication.

10) The student will demonstrate ability to recall rules for spelling words and apply the rule to everyday writing.

E) The student will be able to develop ability to use library resources:

1) Given an unfamiliar book, the student will find the book in the card catalogue.

2) The student will demonstrate the ability to use the index, table of contents, title page of a book to find specific information.

3) In a given situation, the student will select the correct resource book.

4) Given a dictionary, encyclopedia, thesarus, or directory, the student will demonstrate the ability to find words or references.

5) The student will demonstrate the ability to gather resource material from periodicals, books, newspapers, and reference books.

6) The student will demonstrate ability to find a given book on the shelf.

7) The student will demonstrate the ability to write book reports, summaries, note-taking, outlines, research reports, classification (words, facts, ideas, events, etc.).

F) The student will be able to increase vocabulary:

1) The student will demonstrate that he has increased his vocabulary by his ability to do the following:
   a. Build a variety of word lists
   b. Use synonyms, homonyms, and antonyms
   c. Use dictionary
   d. Increase sight vocabulary in reading

G) The student will be able to write legibly:

1) Using small muscles to work with scissors, clay and crayon, the student will demonstrate his ability to be ready to begin to write.

2) Given the opportunity to make and match shapes, circles, lines, squares, the student will demonstrate readiness for learning alphabet to write it.

3) Given the knowledge of correct position, holding pencil, left to right progression, the student will be able to recognize and write letters of the alphabet correctly.

4) The student will be able to demonstrate ability to compare own writing with models.

5) The student will demonstrate his ability to do simple copying by reproducing a copy of a short story.

Intermediate

A) The student will be able to understand and use the English language as a system of symbols:

1) The student will demonstrate ability to listen well.

2) The student will demonstrate the ability to communicate orally.

3) The student will demonstrate an understanding of the history, structure, and usage of one's language.

4) The student will demonstrate competency in spelling.

5) The student will develop the ability to use reference skills.

6) The student will show evidence of an increased vocabulary.

7) The student will develop legible writing.

8) The student will be able to use self-evaluation and proof-reading skills.

II) COMPOSITION

Primary

A) The student will be able to understand relationship between oral and written work:

1) The student will dictate experience charts and stories.

2) Given objects in the classroom, the student will be able to read the labels on the objects.

3) The student will experience self-expression through oral and written language by being able to:
  a. Illustrate own thoughts and feelings
  b. Relate past experiences
  c. Express in various forms -- summarizing, letter writing, creative writing, expository writing, descriptive writing, etc.

4) Given a topic, the student will write a brief story, or anecdote; then tell the same story, preferably, with a recorder, to compare the two versions as to word choice, sentence form, etc.

5) Given an event, the student will be able to make an oral report followed by a written account, with a considerable degree of similarity between the two reports.

B) The student will be able to compose orally, using the devices of effective speaking in formal and informal situations:

1) The student will be able to tell an original story into a tape recorder.

2) The student will dramatize and improvise a selected incident from a story or an experience.

3) The student will demonstrate the ability to give an oral report.

4) At the conclusion of listening to a story, the student will be able to give word pictures. Success will be measured by the number of details.

5) The student will be able to participate in group discussion.

6) The student will describe a hobby. Examples: making of an airplane model, describing an art object.

7) The student will entertain by humorous personal experiences.

8) The student will describe a vacation trip, including: location, time, mode of travel, reaction to the trip.

9) Given an object to describe orally, the student will be able to write a paragraph describing the object in a subjective manner.

C) The student will be able to express ideas in various written forms:

1) The student will write invitations, thank-you notes and get-well letters.

2) The student will be able to compose poetry.

3) Given suggested titles on topics, the student will compose a story.

4) At the conclusion of hearing or reading fables, tall tales, myths, fantasy, narrative, etc., the student will compose similar stories of their own.

5) The student will be able to write paragraphs using different classes of words, including sensory words, descriptive words, feeling words, image words.

6) The student will demonstrate the ability to give reports on subject matter.

7) Given new stories, the student will be able to compare the selections as to clarity, conciseness, accuracy or style.

8) The student will be able to write a characterization in paragraph form which includes one detail in each of the following categories:
the way the individual looks, behaves, dresses, speaks

D) The student will be able to have a sense of individual style:

1) The student will be able to keep a diary or journal.

2) Given a topic, the student will write one sentence, i.e., "A hot day, lovely spot, freshly baked bread, etc."

E) The student will be able to use self-evaluation and proofreading skills:

1) Given a selection, the student will extract a sentence for evaluation.

2) Given a paragraph, the student will locate and correct errors of mechanics, word omission and grammar.

3) The student will devise questions to aid self-evaluation, ie.,
   a. Why am I writing this?
   b. Does it make good sense?
   c. Would people understand it?

Intermediate

A) The student will be able to translate thought into words for a specific audience and purpose:

1) The student will show an understanding of the relationship between the oral and written word.

2) The student will be able to develop skill in oral composition for use in both formal and informal situations.

3) The student will be able to express ideas in various written forms and have a sense of his own individual style.

III) LITERATURE

A) The student will be able to understand story sequence, elements of plot, and to anticipate outcome:

1) After listening to stories, the student will be able to:
  a. Retell stories or rhymes
  b. List sequence of events
  c. Explain and summarize plot
  d. Differentiate fact from fantasy
  e. Discuss importance of time and place
  f. Recall significant details

2) The student will be able to memorize and recite selections from literature.

3) The student will be able to dramatize a story.

4) Given information, the student will be able to make inferences.

5) The student will be able to analyze a story/presentation for problem and character change.

6) Given a problem from a story, the student will be able to give a talk about it.

7) The student will be able to relate a story graphically (identify elements, beginnings, complications, climax and ending).

B) The student will be able to understand character analysis:

1) In a given story, the student will dramatize or improvise and be able to show understanding of a character.

2) After a reading, the student will be able to discuss character traits.

3) The student will be able to role-play a life situation.

4) From a given story, the student will be able to:
  a. Compare and contrast two different characters
  b. Identify main characters and supporting characters in a story
  c. Recognize different roles of characters

5) The student will show an awareness of character traits by naming them.

C) The student will be able to discover the author's comment on human relationships (theme):

1) Following a reading, the student will be able to participate in group discussion.

2) After a reading, the student will be able to:
   a. Identify main idea or central thought in a story
   b. Improvise a story theme (dramatize)
   c. Identify qualities, i.e., hate, fear, friendship, or bravery
   d. Identify inferences made by the author (read between the lines)
   e. Predict the outcome of a story.

D) The student will be able to understand the author's point-of-view:

1) After a reading of a story the student will be able to:
   a. Participate in group discussion
   b. Tell a story from a character's point-of-view
   c. Answer questions, i.e., "Through whose eyes do we see the events of the story?"
   d. Discuss the effects of using a different point-of-view

E) The student will be able to recognize literary forms:

1) After listening to or reading a story, the student will be able to identify a wide variety of forms, e.g., fairly tale, folk tale, fable, Mother Goose, tall tales, poetry, dialect story.

2) The student will be able to distinguish fact from fantasy in a story, or between stories.

F) The student will be able to appreciete imagery and figurative language:

1) The student will be able to read figurative poems and stories with understanding and expression.

2) The student will demonstrate the use of similes, e.g., as soft as, as tall as, in oral or written work.

3) From stories read or written, the student will be able to pick out descriptive phrases.

4) The student will be able to demonstrate the knowledge of imagery by selecting "word pictures" from stories written by other children or in selected reading.

Intermediate

A) The student will develop the ability to judge, appreciate and enjoy a variety of literature:

1) The student will be able to demonstrate an understanding of story sequence, elements of plot and be able to anticipate outcome.

2) The student will be able to show an understanding of the personality traits of literary characters.

3) The student will demonstrate an ability to perceive the author's point-of-view in literary selections.

4) The student will be able to recognize literary forms.

5) The student will demonstrate an appreciation of imagery and figurative language.

5) Personal Development

Objectives for personal development are obviously of a different character than the three subject areas we have covered: mathematics, reading, and language. Although many teachers do have the growth of personality and character in mind as desirable goals for children in their classrooms, they are less familiar with the concept of specific personal development objectives articulated in behavioral terms. The Triangle Model includes such objectives because of the critical importance of personal growth in all elementary classrooms, but especially in the bilingual/bicultural setting where the Mexican-American child is struggling to build self-identity in the face of lingual and cultural obstacles.

Many school districts have general statements of philosophy which include passages relating specifically to the personal or social as well as the academic development of students. But probably fewer have explicated such concepts of personal growth in the form of specific objectives. The Triangle Model provides a two-part list: general objectives for all children, English-speaking and Spanish-speaking, based on an exemplary program to develop strong and healthy self-concept in the Ocean View (California) school district; and a set of behaviors designed especially for the Mexican-American child in the bilingual/bicultural setting.

I) GENERAL OBJECTIVES

I - The Child Indicates Awareness

Awareness is being "tuned in" to one's environment, to the effects of one's environment, and to other people in one's environment. It also implies a willingness to respond to others and to one's environment. The aware child does not have to consistently withdraw to a fantasy world in denial or fear of the real world. The child with a healthy self-concept values himself and his world enough to recognize and respond to that world.

II - The Child Indicates Self-Reliance

The self-reliant and self-controlled individual assumes responsibility for his own decisions, emotions, and behaviors. The child with a healthy self-concept can decide upon and behave in ways that are beneficial for himself and for others. This capacity to exercise self control and self management is necessary in classroom learning situations, and it is an equally important learning for the development of a responsible life.

III - The Child Indicates an Acceptance of Self

The child who accepts himself indicates that he sees himself accurately and realistically. This implies an acceptance of his physical, intellectual, emotional and social self. The child understands his strengths and weaknesses and can handle both without feelings of excessive pride or defeat. The child understands and accepts his similarities to and differences from others and understands what can be changed and what cannot be changed.

IV - The Child Indicates a Feeling of Well-Being

A child who has a feeling of well-being feels good about himself and has a positive outlook towards his future. He has a feeling of being healthy and well, of being personally safe and secure, and of being happy and content. The child feels valuable and valued, for he sees that he is a unique and special person, and he sees that others recognize and value his uniqueness.

V - The Child Indicates a Feeling of Being Competent

A child who indicates the feelings of being competent believes that he has the abilities or qualities to be successful in some task, such as being academically competent, physically competent, socially competent, or artistically competent. Competency can be not only in relation to activities such as reading, music, and baseball, but competency can also be in relation to interactions with people such as leadership, sensitivity, and understanding.

VI - The Child Indicates a Feeling of Being Accepted

For a child to develop a healthy self-concept, he must feel accepted by his family, peers, and other significant adults. This acceptance means receiving attention, interest, concern, affection, and love from others who are important to him. At home the child feels well treated and loved for his family accepts, values and respects him as a worthy, important, likable individual. With his peers, he feels liked, sought after, and wanted. In school, the child feels accepted and liked by his teachers, and he feels that the school generally considers and treats him as being acceptable.

II) SPECIAL OBJECTIVES FOR MEXICAN-AMERICAN STUDENTS

1. Speaks Spanish willingly:

    a. speaks Spanish spontaneously in and out of the classroom

    b. does not hesitate to respond in Spanish or at least makes an attempt to do so when addressed in Spanish

    c. takes the initiative in speaking Spanish with others

    d. helps adults and other children learn Spanish in the classroom (that is, he helps the teacher and tutors other children)

    e. enjoys lessons in Spanish

2. Does not reject other Mexican-Americans as peers: this is another general category of pathological behaviors created by an educational system fostering cultural exclusion which causes Chicano children to reject members of their own ethnic group. Behaviors we look for in this category are:

    a. joins in activities with other Mexican-American children

    b. speaks favorably of other Mexican-American children

    c. helps and tutors other Chicanos willingly, and seeks to befriend Chicano children rejected by other class members.

3. In line with not rejecting Mexican-Americans as friends, we also believe that ethnic price means that the child does not limit his friendships exclusively to Chicano peers. We look for the child's willingness to interact with children who are not of Mexican descent in this category. An undemocratic system creates ethnic isolationism.

4. Acknowledges Mexican-American culture:

    a. the child talks about Mexican holidays and Mexican and Mexican-American heroes

    b. he enjoys role-playing the Chicano-heritage lessons

    c. he enjoys doing Mexican dances or participating in Mexican games

    d. he listens attentively to stories, classroom activities related to Chicano culture

    e. he brings culturally distinct toys, foods, and objects from home.

5. Exhibits cultural role versatility:

    a. appears to be equally comfortable when interacting with Chicano and Anglo peers

    b. enjoys playing both Chicano and Anglo roles in heritage productions

6) Summary

Each district must select or develop its own goals and objectives as determined by the district's educational needs, interests, and priorities. Other factors that can influence the selection or development of suitable program objectives to guide curriculum development are:

- the availability of curriculum guides or other structured programs
- the demands of evaluation in the district
- the constraints of law or policy as determined by higher authorities, such as a state department of education
- resources that are available for fulfilling any hypothetical set of objectives
- tradition and customary handling of the goal-setting function in the district
- the extent and degree of long-range planning called for by district administrators
- the working styles and operational schemes of district curriculum and program developers.

Yet most important of all is the commitment to a point of view about education in general, and bilingual/bicultural education in particular. For example, if a district represents a community with only limited aspirations to bilingualism/biculturalism, whatever the reason, the shape of objectives for the students will probably be different from that of a community striving for full bilingualism/biculturalism. Such an objective as learning the Spanish language might be for only some children in some settings, for all children (including the "anglos") in others.

C) STUDENT LEARNING EXPERIENCES

1) Activities in Mathematics and other areas:

The selection of a scheme of goals and objectives presents the curriculum developer with his most difficult task: that of conceiving of activities which, when carried out, will help children fulfill the objectives and acquire the competencies which are the intended consequence. These activities or learning experiences are what some persons call the "curriculum," but for others that term is too broad. In any case, activities constitute the things that the children do, the structured and planned behavior in the learning setting for the accomplishment of some objectives-related task.

Since the entire field is still young, program development efforts in bilingual/bicultural education are still locally oriented, with incipient efforts directed by various state and community task forces on bilingual education, or an occasional special project like those in Dade County, Florida, or Riverside, California. Thus program planners have had virtually no precedent and generally few established resources to draw upon for actual learning activities.

In fact, it was initially assumed by the Triangle Model planners that in order to develop just a math program alone the primary task would be to conduct a search of available mathematics programs for those which might already be available in Spanish or which could be easily adapted to Spanish and other bicultural considerations. Such texts exist, but they are primarily translations of English-based materials, and do not necessarily attend to all of the variables enumerated by the Triangle Model.

There are, however, a number of considerations which could facilitate the planning of activities for a Triangle Program:

a) Educational Philosophy of the district in general and as to bilingual/bicultural education ought to be implicit in the selection of learning experiences. If the commitment is to cultural democracy it makes no sense to use activities which work against the establishment of that ambience in the classroom.

b) Goals and Objectives of the Triangle Model provide the framework for the selection of activities designed to carry them out. Whether the program has the four developmental areas worked out in four separate lists of objectives, or in one integrated pattern of objectives, these provide the standard against which the suitability of any learning activity must be measured. These guide the sequencing of experience, and direct the eventual outcomes.

c) Cultural Patterns making up an information/knowledge base of bilingual/bicultural considerations ought to serve as an additional set of parameters for the selection or development of activities. The application of these variables (such as the five discussed earlier or others) to lists of objectives will in itself provide some criteria for activities: for example, of one considers some aspects of field dependent behavior in the Mexican-American student, one can come to the conclusion that a storytelling session rather than a writing session might elicit more favorable performance from those students.

d) Organizing Ideas also provide clues as to the nature and shape of learning experiences. For example, the principle of interactive developmental areas implies that activities which link solving a language problem with a math problem are to be preferred over those experiences which treat the areas separately.

e) Sources for Activities or ideas for them could include commercial packages, district curriculum guides, special projects retrieved from ERIC, etc. But the idiosyncratic quality of the goal-setting in a Triangle Program may demand that districts usually develop their own activities to match their unique set of objectives.

2) Student Learning Materials:

A) Introduction

Because of the relative newness of bilingual/bicultural education programs, those in the field are still formulating basic concepts and exploratory activities. Projects are primarily on a local level and often have rather modest overall objectives, confined to single subject areas or "heritage curriculum."

Certainly nothing on the scale of the large science and mathematics curriculum development efforts of the 1950's or 1960's has been attempted in bilingual education. Thus no large-scale attentions have been given to the development of materials either, materials which could serve to support new instructional programs. Instead, what seems to be the pattern is that local communities or state boards of education set up task forces on bilingual education which try and adapt the existing curriculum as much as possible to the identified needs of the bilingual children. Additional materials and curriculum relating to ethnic heritage and background are often included, but there has been little commercial or project production of curriculum materials in the basic subject areas for national use. Again, this does not mean that bilingual/bicultural education programs existing today do not address, for example, reading and math, but only that in doing so they have tended to concentrate on translations and adaptations rather than completely new support materials.

Thus it becomes important, especially with the field at such an incipient stage of development, to formulate some standards and criteria which might guide those who eventually will create new curricula and instructional media for the bilingual setting. Experts in the field would prefer to see materials designed with the bilingual child in mind from the start, rather than sometimes weak adaptations which must be made for economy or convenience. These "criteria" would therefore provide some framework for designing materials and for checking the adequacy of those on-the-shelf items which are currently or prospectively in use.

The derivation of these standards or criteria is significant to note. In the present instance they are derived directly from a consideration of what bearing certain concepts dealing with bilingual/bicultural education have for the design and construction of instructional support media. The point of departure is therefore that general information/knowledge base we now have regarding bilingual education. Such general concepts and characteristics provide the "filter" or foundation from which a set of criteria for materials to be developed for the Triangle curriculum are to be based.

It must also be noted that the choice of a curriculum, whether commercially-produced, school district guidelined, or local project or school-based, will of course be critically important in the choice of materials, and will in fact determine what is and is not required to support the curriculum. The specifications cited by the Triangle Model for materials are thus general requirements to be applied to any bilingual math curriculum, whatever the local choice. They are not abstracted or designed to fit one particular scheme for teaching mathematics and other subjects in a bilingual/bicultural classroom.

Finally, we must note that the specifications which are consequent upon the following analysis do not include certain aspects of materials development which are not within the scope of the Model, such as techniques of materials design and development, stages of product growth, and the like. Instead, we consider here what special factors there are in bilingual education which provide some criteria for the design and development of materials eventually required by a Triangle Program.

B) Application of "Cultural Patterns"

1) Field dependence-independence: this concept has direct meaning for the manipulatives in particular in a Triangle Program. Since the field dependent child can master a concept best by proceeding from wholes to parts (deductive), it follows that materials for his use might best involve games or activities in which the goal is to take something apart and study the parts rather than putting something together and studying the whole. The opposite seems to be true for the field independent child, who prefers the inductive process of building wholes from parts. A manipulative which permitted children to use it both ways, so that both "directive"/deductive and "discovery"/inductive methods could be applied would be desirable. The acquisition of skills in math and language will depend, as we have said before, upon children being permitted to function perceptually and intellectually in that cognitive style which makes them feel most comfortable.

The materials should be sufficiently flexible to be adapted to either mode, but also to be used by the child in that mode to which he or she is not accustomed. Thus materials ought to have simple explanatory handbills or information sheets for teachers and perhaps students as well which enable them to try them out in some alternative ways. The Mexican-American child, for example, although not preferring the analytic mode of dealing with parts in order to constitute a whole, could profit from being encouraged to work in that way. This can be requested even though the student may already have mastered the concept for which the materials were designed.

In general, the materials must be designed keeping all of the significant differences between field dependents and field independents in mind. Thus materials like worksheets, manipulatives, and other items must either offer options, or exist in parallel forms for the students.

2) Cooperation/Competition: this aspect of field dependence and independence is critically important. The design of games, exercises, and support materials ought to recognize the importance of cooperation rather than competition for the Mexican-American children. Although the Anglo child has grown up and been schooled in a competitive atmosphere, in which each student has to fend for himself, the bilingual child feels more at home in a cooperative, team setting. For this reason the materials must lend themselves to group activities, and to cooperative enterprise. Exercises which require several people to participate in order for their fulfillment are to be recommended.

Some of the ways in which materials could foster this spirit of cooperation are to give only parts of a problem to each student so they must get together to come up with a solution; devise sharing games in which it is possible for many students to use fewer materials; organize student use of manipulatives and other media in teams, or in small groups, rather than at individual desks; and, have paraprofessionals and others (parents, etc.) emphasize cooperation and teamwork and sharing in student activities.

3) Personal Involvement: a broad range of personal involvement for the bilingual student with the materials is also dictated. The materials should use child-centered illustrations and thus provide familiar objects for children to relate to. This would be true for visual displays, worksheets or workbooks, manipulatives, films, books, slide-tapes or other media. The Spanish-speaking child cannot relate well to abstractions as well as he can relate to human content, therefore the materials should be organized around faces and home objects rather than geometric figures and other formal presentations.

As we discussed earlier, the need for strong interpersonal attachments for the bilingual child requires a general humanization of the entire curriculum. One of the most concrete, tangible, and visible places for this to occur is in the instructional support materials, for this is where the children encounter reality. The talk about math, the numbers and formulas remain abstractions; where these take root is in the first-hand experiences children have with materials. It is therefore important to speak of how children relate to the materials themselves. If a warm and sensitive human relational style is called for in one's instructional strategy, this must be manifest in the support materials for that strategy as well.

Some of the ways in which this humanization which is consistent with a human relational style can be incorporated into the materials are to use familiar objects, preferably human or anthopomorphic; arrange exercises around stories or events that emphasize human activity and interpersonal conduct, such as in dramatization; utilize fantasy when possible, such as utilizing puppets which can talk to the children about mathematics and language; and by using color wherever possible and other means to make materials physically attractive and interesting to children, to increase their chances of being motivated to use them.

4) Bilingualism: the materials of a Triangle Program must be usable in both Spanish and English so that they are linguistically appropriate for children. In the first instance the materials should enable a child who speaks primarily one language to learn everything he needs to know about math in the one language; but at a second and more complex level, we wish children to also learn about language, so that their development in math is paralleled by development in language. Thus the materials, consisting of workbooks, narrations to stories, labels for displays, instructions for games and activities, and other places where discursive or verbal data is needed, must be suitable for both the Spanish and English speakers.

There are several options for arranging materials so that they have this dual language characteristic. Either a single curriculum with attendant materials can be adapted or developed, with translations of both languages; or a parallel set of curricular materials can be devised for two sequences of study that attend to the same content even if they go about teaching it differently. The advantage of the first option is that it is probably less expensive, easier to adapt existing materials to, and has the virtue of intrinsically maintaining consistency between the Spanish and the English versions.

The advantages of the second option for material development regarding the bilingualism variable are that it permits curricula to be constructed according to the ethnic and lingual needs of different groups of children; it provides for more variety and change in the curriculum, especially as experienced by those children who switch from one language to another; and that it may provide interesting experimental situations to have parallel curricula in a classroom each based on differing learning styles. The problem with this approach is that it becomes increasingly difficult to provide parallelism which would enable children to switch back and forth between the languages.

5) Cultural Democracy: this concept related to the ambience of the classroom and to the attitudes and teaching styles manifest by the adults in the setting. The child is entitled, by right, to be taught and interacted with according to the psychological, intellectual, social, and cultural dispositions which he or she is imbued with as a result of upbringing, ethnic history, and choice. The implication of this for the materials for a Triangle Program refers primarily to the opportunities those materials give a child for working in a preferred mode (perceptually, intellectually, etc.) and establishing and maintaining an ethnic identity.

How to establish contacts with ethnic background has been, in fact, one of the central curriculum development problems throughout the 1960's, as educators sought to find within social studies, literature, and even science some points of contact with black history, Mexican-American history, and other minority histories and cultures. From these points of contact curricula was developed which utilized ethnic references, both as illustrations and exemplars deemed especially appropriate for certain groups of children with regard to the subject matter under attention, and for the purpose as well of building ethnic pride, self-identity, and other psychological and personal strengths which were previously neglected in the education of children, and especially minority children or "culturally different" children.

With the Triangle Program the thrust is towards combining mathematics training with as much language experience as possible, thus it becomes obligatory to speak as well as illustrate visually some sense of cultural heritage and background. "Cultural Democracy" is presumably achieved by fostering the cooperation and teamwork spoken of earlier in this chapter. Through mutual learning the children may be given incentive to help and respect each other more. Finally, the enhancement of a program through biculturalism, through providing materials which respect and are derived from sources within both cultures, promotes, we believe, the establishment of a richer learning environment for all the children. Opportunities for learning about people and their differences, as well as for acquiring subject matter skills, could flow from the use of "culturally democratic" materials.

6) Modes of Bilingual Education: materials ought to be consistent with the kind of bilingual education (as defined in chapter four) generally sought in a particular school or community. The extent and degree of fluency, literacy, and other aspects of language development

operating in a given situation may help determine the character of the curriculum and consequently the support materials.

As an example, suppose that the predominant mode of bilingual education in a city is what we have called "Transitional Bilingualism." In this case it would be far less important for the materials to have parallelism between English and Spanish than it would be if the dominant mode were "Full Bilingualism." The reason is that in the former, we do not strive to preserve the child's Spanish language but leave it to chance; if it can be preserved, while the child masters English, that is fine, but the overriding concern is to learn English, even at the expense of the Spanish.

In the latter instance, "Full Bilingualism," materials must permit the switching back and forth that would be part of a program where children were encouraged to be fluent and literate in both, and neither language at the expense of the other. In both circumstances, community standards and more general school objectives would dictate a choice for curriculum, and materials would obviously follow.

7) The Mexican-American culture: examples and illustrations ought to be of familiar objects to the children, but in addition it is desirable in the bilingual curriculum to include references to heritage and ethnic background where possible. This specification can be and probably has been abused in some instances, where the original curricular goals, which were to be merely facilitated by the addition of heritage material, became subordinate to that. We are not, at the elementary level, suggesting that the social-politicization of content -- which

may occur at the higher educational level to an extreme -- be carried out to more than a modest and reasonable degree. It would be patently one-sided, for example, for the curriculum to use all examples and activities which put the Anglo children at a disadvantage.

The point is to have a richness and variety among the materials so that they are not dominated by the cultural difference, but are able to give some attention to it. If there are many alternatives and competing approaches in a curriculum system, no one need be at a disadvantage just because some materials contain ideas which are more familiar to one group of children rather than another.

8) Reactions to Majority Culture: the point here is community suitability. Depending upon how the larger world of administrators and parents and community people feel about bilingual/bicultural education, adjustments can be made in the curricula and materials to reflect that commitment.

In terms of materials for mathematics, there are limited opportunities for incorporating the community variable, except insofar as the games, activities, and supportive materials incorporate a particular bilingual view on the way towards learning math. Unlike the social sciences, we do not think of the subject matter of math as "value-based." More important is the way the materials which also involve language skills (in conjunction with the math) are handled, for these can reveal "reaction to the majority culture" in subtle ways. The commitment to preserving the ancient heritage at the same time that the new heritage is assimilated might call for very different illustrations, examples, and stories than if a community has dispensed with the old culture and actually wants its children to give full interest and attention to "the melting pot."

9) Extended Family: the importance of the extended family in the Mexican-American culture for any curriculum is that if the family can be involved, including valued friends and peers, the interest and motivation of the child is likely to be strengthened. Thus take-home materials -- activities, projects, games, kits, books, and other items -- are highly desirable in any group of Triangle support media. This helps bring the family closer to the reality of the child's schooling, and may even have a transfer effect on younger children and contemporaries at home. This promotes the cooperation and sharing which is also desired.

10) Summary: the previous introduction and analysis regarding the materials component for a Triangle Program has emphasized conceptual consistency between the main intellectual buildingstones of bilingual/bicultural education and the character of the materials which are created to help implement it. Although the materials must follow the curriculum, we have tried to discern some generalizations which could apply regardless of the particular curriculum adapted or invented for Triangle purposes. These generalizations are designed to help support the program goals, by providing a frame of reference or set of criteria by which materials developers could be guided.

C) Criteria

Based upon considerations elicited by the previous analysis of the bearing of cultural patterns upon developing instructional support materials, the Triangle Model specifies the following criteria as constituting a set of standards for the selection or creation of bilingual/bicultural support media.

a) PERFORMANCE OBJECTIVES

Materials must be clearly related to the fulfillment of specific performance objectives. That is, the materials are not simply furnished as a set of general resources, but are to be designed for specific purposes, these described by the objectives.

Variations of the materials are desirable when it is possible to support the fulfillment of an objective in math or language through alternative means.

Performance objectives stated for math and language ought to call for the use of specific instructional support materials when these are essential or indispensable to meeting the objective.

b) DIRECTIVE/DEDUCTIVE VERSUS DISCOVERY/INDUCTIVE

The field dependent child needs direction, and can master a concept best by starting with its global characteristics, a unified whole, and deducing the details and components from there.

On the other hand, the field independent child may prefer to begin with the parts, and from that point to induce or discover the whole. Thus the analytic mode is held to be more suited to the field independent, and a less abstract and more personal mode necessary for the field dependent.

In terms of materials, these different learning styles dictate that means must be available for moving in both ways toward the acquisition of math and language skills.

If the materials are sufficiently flexible, they can be adapted by the teacher or aide to the appropriate cognitive style of the children.

c) LINGUISTIC APPROPRIATENESS

Materials supporting the curriculum must be linguistically appropriate for each child. That is, each child, whether speaking primarily English or primarily Spanish, must be able to use materials which are suited for that student's beginning language abilities.

This means that language ability must first be diagnosed, and then appropriate materials offered which move the child along his or her preferred language track in mathematics as the other language is gradually experienced.

Therefore all materials available in one language must be available in the other as well, yet each concept or skill may not need to be covered exactly in the same way in the two languages.

As the child's linguistic range is increased, the materials must permit the student to switch back and forth from one language to the other, so he can eventually master problems in both lingual modes.

Vocabulary and language patterns are integral to understanding math or any other subject, therefore materials designed for teaching mathematics must also have the capability to implicitly teach about language as well.

d) COOPERATIVE DIMENSION

Materials ought to be devised that permit children to work together in their learning activities.

Research by Kagen and Madsen (1972) demonstrated that the Mexican-American child is more highly motivated by a cooperative rather than a competitive setting.

One possible way for materials to facilitate cooperative work is for them to be designed in such a way that they must be used by teams or small groups of students.

Especially good are cooperative activities such as games in which there are no winners or losers; if the game atmosphere must be competitive, it should be between groups rather than individual children.

e) PERSONAL INVOLVEMENT

It is desirable for the children to have some part, if at all possible, in the design and/or creation of at least some of the materials they use.

This increases a sense of personal involvement, which may be especially critical to the learning opportunities for the Spanish-speaking children.

Personal involvement also occurs when illustrations are child-centered and give children something familiar to relate to.

Some consequences of personal involvement are that it may facilitate the acquisition of auxiliary skills, such as following directions, eye-hand coordination, evaluating and judging, and so forth.

f) HUMAN CONTENT, FANTASY, HUMOR

The need for strong interpersonal attachments among the Mexican-American children can be met in part through the "humanization" of curriculum materials.

Specifically, this means that whenever familiar forms can be used rather than abstract and non-familiar ones, the materials should do so. Five faces or animals or anthropomorphic objects is preferable to five abstract symbols, like circles or numbers.

Ramirez, Price-Williams, and Beman (1971) have shown that Mexican-American children tell longer and more complex stories when describing a picture than do Anglo and other children, suggesting that they may be more motivated to learn math if the materials they deal with have this "human content."

Dramatization and other fantasy-producing activities may also promote math learning readiness. Puppets have been used successfully to induce children to want to learn about arithmetic. Field dependent children will relate to puppets, talk to them, listen to them and watch them closely.

g) PHYSICAL ATTRACTIVENESS

Printed matter or other materials ought to be of such format and design so as to engage children's interest and enthusiasm.

This means neat, clear simple uncluttered writing and/or pictures. Clutter can confuse children, thus worksheets ought not to include too many items (six pages with one exercise each is preferable to one page with six exercises or other items on it).

Objects depicted should be familiar to children, such as animals, faces, household items, etc. With the Mexican-American child, for whom interpersonal relations developed out of family and peer group style are critical factors in learning readiness, it is essential that pictorial material have a humanized, familiar dimension.

h) MANIPULATIVES

Curriculum must include concrete, tangible objects which facilitate the learning activities.

Manipulatives could include Montessori-type items, and other standard-fare mathematics materials, like the cuisenaire rods.

Manipulatives are "universals," can be used with children regardless of their cognitive preference or style.

Perhaps the manipulatives or some of them could be made by the teacher and children themselves. This would promote the personal involvement which is desired for Triangle.

i) TAKE HOME MATERIALS

Spanish-speaking children's "need achievement" for family is higher than for self, and therefore materials which can be designed for home use may tap the interpersonal resources available in the non-school setting.

Take home materials increase the opportunity for parental and sibling participation; active interest by others can facilitate the child's desire to be a source of pride through learning accomplishments.

The sharing of materials with other children in the home setting enables the student to maintain a cooperative momentum which is reinforced by small group practice in the classroom.

j) PRESCRIPTIVE MINI-CURRICULUM

Materials should include backup or supplementary items to assist the child who fails to meet the performance objectives in math and/or other developmental areas.

These supplementary or "remedial" materials could thus constitute a prescriptive "mini-curriculum" for use when it is necessary to provide extra or intensive experience in math or other subjects in the Triangle classroom.

Alternate curriculum paths permit the teacher to meet each child's entry or progress level with materials appropriate to the child's individual needs at any time.

D) STUDENT EVALUATION

1) Modes of Evaluation

a) Achievement Tests:

Standardized achievement tests generally fail to provide the most valid information relative to the achievement of Mexican-American children in the areas of mathematics, reading, language and personal development.

For example, there are many problems to be overcome if the testing of language development among these bilingual or non-standard English-speaking pupils is to be meaningful and reliable. Ordinary commercial or standardized tests of language, as in usage, mechanics, sentence structure and the like, have no validity in this population. (Guidelines, 1964; Williams, 1971) Such tests are standardized on middle class pupils who speak standard English. Hence their standards discriminate against any bilingual or dialect speaker. (Brodie, 1970) The Mexican-American population also lacks sophistication in taking tests, responds poorly to timed tests, is easily upset by test-taking, and is not competitively motivated to make their best possible effort. (Williams, 1971) Moreover, the use of standardized tests assumes that the primary purpose is to compare these pupils with some standard, rather than simple to observe their progress from their present status toward a future performance.

On the other hand, some achievement measures could be useful in comparing progress in a Triangle Program, for a group as a whole, for example, relative to other groups in other programs.

b) Criterion-Referenced Tests:

The most effective measure of student performance in the competency-based Triangle Model are criterion referenced test items developed for each instructional objective. These test items would need to be developed in both English and Spanish and require the application of concepts identified in describing the cultural patterns of the Mexican-American students.

Criterion-referenced items can be developed for each objective, and children assessed according to their performance against the criterion, not against group norms determined by achievement averages. Thus the criterion-referenced tests provide more opportunities for individualization in various phases of evaluation. Yet their sparse occurence in school testing generally makes it difficult to obtain an overall measure of program evaluation.

c) Blending the two modes:

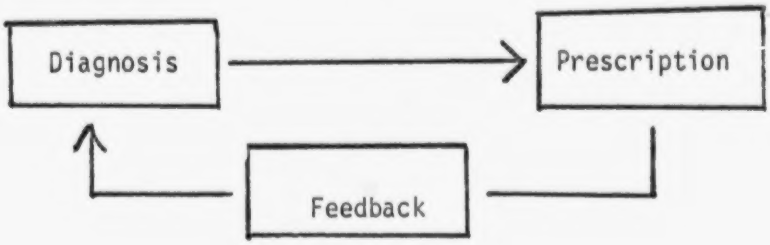
The use of either achievement tests or criterion-referenced tests throughout each and every phase of the evaluation of a Triangle Program would be inadequate because of the different strengths and weaknesses they each have. Achievement tests are much more plentiful, easier to construct, and more in general usage. People are accustomed to them and can obtain them more readily. Criterion-Referenced tests, many fewer in number and less familiar to schoolpeople, are tied to objectives and thus excellent measures for assessing performance relative to the program itself, but insufficient for comparing overall results to other programs which depend on achievement measures.

What is called for here is a blend of the two modes, each to the task it can handle best. Thus the Triangle Model recognizes the reality of achievement tests dominating student assessment, and prescribes their use in overall program evaluation in pre- and post-phases, for comparison to larger populations. But for individual assessment of students within the program, for diagnosing competency and maintaining continuing feedback on students while in the program, criterion-referenced measures are most conducive to a competency-based set of objectives and to individualization. This prescription enables the Triangle teacher to obtain information which will enable him or her to continually adjust to the student's development relative to his or her own starting point, not to some group average.

2) Phases of Evaluation (see figure 2)

a) Pre-test: for diagnosis of individual students (criterion-reference) and for group performance for later comparison to other programs (achievement).

b) In Process (formative evaluation): for individual progress in fulfilling competency-based objectives (criterion-reference). The sequence is diagnosis, prescription of learning activity, feedback, adjustment to diagnosis and prescription (see figure 3):



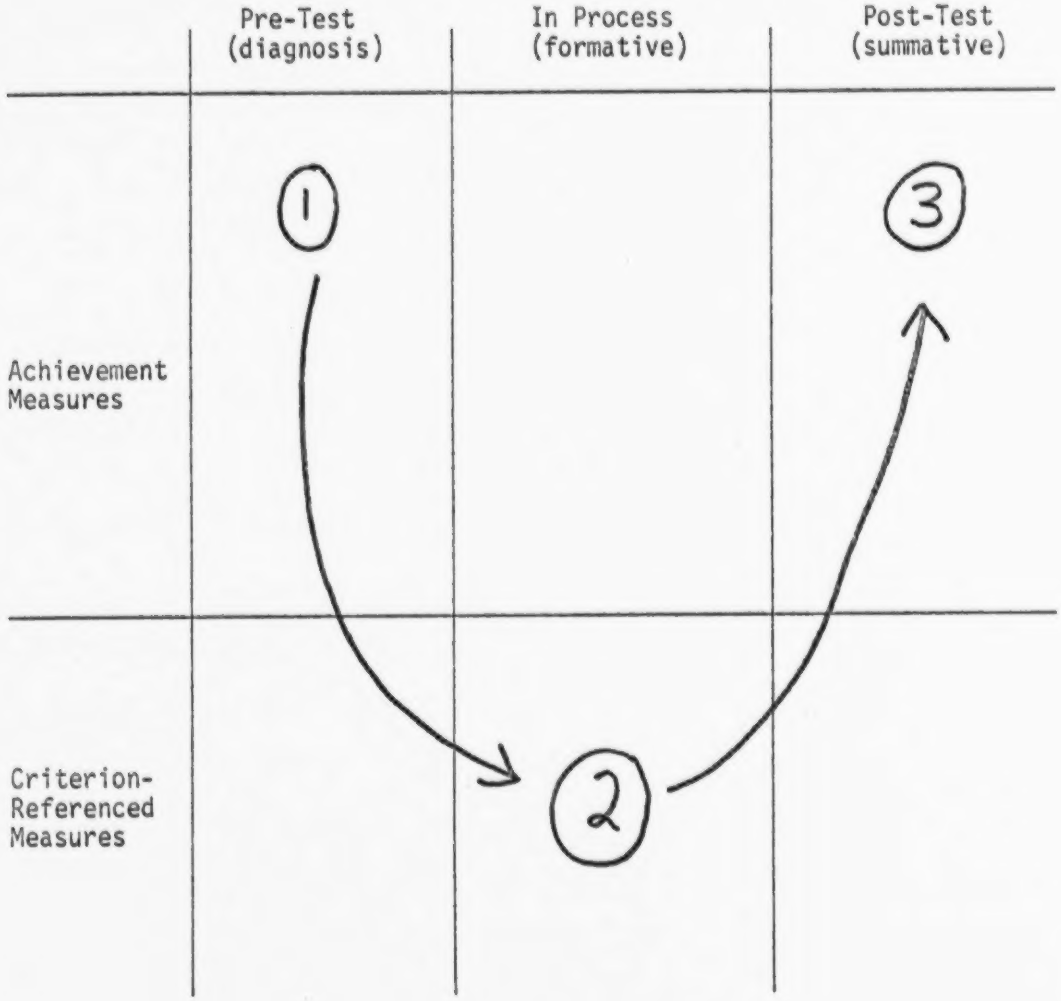
(figure 3)

c) Post-test (summative evaluation): individual and group assessment relative to other programs (achievement).

3) Evaluation in the four areas

There are many achievement tests for each important area of academic school performance. There are many fewer validated criterion-referenced instruments; in fact, criterion referenced test items are only available

Phases of Student Evaluation


Pre-Test
(diagnosis)
In Process
(formative)
Post-Test
(summative)
Achievement Measures
Criterion-Referenced Measures
①
②
③

(figure 2)

for a few areas, and in each of those the choice may be rather slim. The following is a summary of some of the measures a curriculum development team might wish to consider to evaluate various parts of a Triangle Program.

a) Evaluating Mathematics Competency of the Learner

A variety of mathematics tests are available to test the achievement level of students. These tests include:

1. Metropolitan Achievement Test
2. California Achievement Test
3. Comprehensive Test of Basic Skills
4. Cooperative Primary Test

Criterion referenced test items are not widely available for a comprehensive set of mathematics objectives and need to be developed by each district.

b) Evaluating Language Competency of the Learner

Standardized achievement tests for measuring language development include:

1. Metropolitan Achievement Test
2. California Achievement Test
3. Comprehensive Test of Basic Skills
4. Cooperative Primary Test
5. STEP Test
6. Stanford Early School Achievement Test
7. Assessment Program of Early Language Levels
8. Test of Basic Experiences, Spanish Administration, Language, Level L.

Other tests of particular utility are the Culturally Democratic Learning Environment Bilingual Concept Test; the Diagnostic Test for Sound Problems; "Shuck Loves Chirley"; the fluency test in Spanish and English developed by the Project for Development of Culturally Democratic Learning Environments; and the Peabody Picture Vocabulary Test.

c) Evaluating Reading Competency of the Learner

A variety of reading tests are available to test the achievement level of students. These tests include:

1. Cooperative Primary Test for Reading
2. Comprehensive Test of Basic Skills
3. California Achievement Test
4. Daley Language Facility Test
5. Metropolitan Achievement Test

Criterion-referenced test materials for reading are available, but they are printed only in English.

For student self-evaluation, Ventura County has developed a checklist for the reading objectives (figure 4a). A sample criterion-referenced test is presented in figure 4b.

d) Evaluating Personal Competencies of the Learner

A number of standard psychological instruments may be utilized for ordinary personality measurement. These devices, such as the California Personality Inventory, will provide a profile of attitudes, dispositions, needs, and interests. These would provide some indication of such relevant variables as self-concept, which figures centrally in the education of all children but is especially critical with the bilingual/bicultural child.

INDIVIDUAL RECORD OF CONTINUOUS PROGRESS IN READING SKILLS

nt's Name ______________________________ School ______________

READING SKILLS	OBJECTIVES														
ATTACK SKILLS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Identify Letters of the Alphabet															
Identify Rhyming Words															
Recognize Basic Sight Words															
s Proper Verb Endings															
Identify Position of Initial, Final, or edial Consonant Sounds															
Identify Long Vowel Sounds															
Identify Short Vowel Sounds															
Identify Initial & Final Blends or Clusters															
Identify Initial & Final Consonant Digraphs															
Identify Special Vowel Sounds, Digraphs d Dipthongs															
Identify the Variant Sounds of Consonants															
s Proper Plural Forms															
Identify Possessive Forms															
Identify Contractions															
Identify Compound Words															
Identify Root Words															
Identify and Knows Meaning of Prefixes															
Identify and Knows Meaning of Suffixes															
Place Stress on the Proper Syllable															
s the Rules Governing Syllabication															
EHENSION SKILLS															
Recognize Word Meanings															
Note Details															
Identify the Main Idea															
Determine Logical Sequence															
RETATION SKILLS															
Make Inferences															
Read Critically															
Recognize Literary Devices															
ENCE AND STUDY SKILLS															
Identify the Parts of a Book															
Use Library Skills Efficiently															
Use Dictionary Properly															
Use Reference Materials															
Use Maps, Globes, Charts, Graphs and agrams to Gain Information															
Use Data Sources															
G MECHANICS															
Interpretation															
nt Reading Efficiency - Speed of Reading															
nt Reading Efficiency - Reading Strategy															

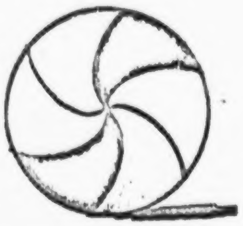
ctions: Color in the box when the objective has been successfully performed.

: The double bar indicates the number of objectives in each section.

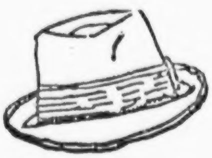
CRITERION REFERENCED READING TEST

Objective 1: Given a picture of a simple object, the student will state the word that the picture portrays.

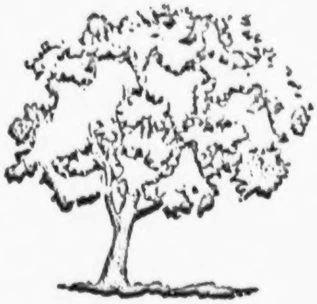
Directions: State the name of the object you see.



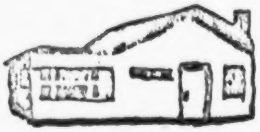
1.



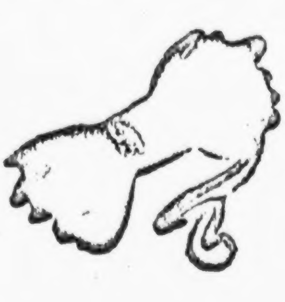
2.



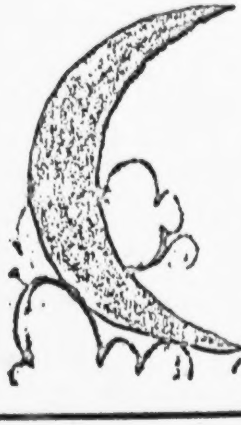
3.



4.



5.



6.

(figure 4b)

The Triangle Model sets up personal development objectives which require attention to perhaps less noticed or special characteristics as well. The incorporation of the "cultural patterns" within a Triangle Program means that the personal dimensions of bilingualism and biculturalism ought to be looked at if possible. Such measures generally need to be developed, but there are some resources which can be drawn upon even now. A sample instrument for student evaluation on personal characteristics is offered in figure 5a and 5b, in both English and Spanish.

One of these is the Portable Rod and Frame Test, used for determining field independence and field dependence.

The Portable Rod and Frame Test is derived from research by Witkin and others. In studying pilots' sense of maintaining an airplane's upright position regardless of surrounding interference, such as clouds or bad weather, the notion emerged that two modes of perception or "cognitive style" were operating. Some pilots had little difficulty maintaining a steady upright position regardless of whether they had lost sight of the ground, while others needed that cue. The two modes were characterized as field dependent and independent.

In working with the Rod and Frame Box, it was found that field dependents have trouble perceiving the rod without focusing at the same time on the tilted frame. In relying so heavily on the frame to make their decision concerning the upright, they leave the rod tilted in one direction or the other, but usually in the direction of the tilt of the frame.

STUDENT WORKSHEET

INSTRUCTIONS: The way each of us feels about things is important. This worksheet asks you some questions about your feelings. Read each question carefully. Then answer each question according to the way you feel today, and as honestly as you can. When you have finished, put your paper into the yellow envelope your teacher has shown you. Your teacher will not grade this paper.

Student Name____ Grade__________________

Date Completed_________________________ Teacher________________________________

		YES	NO
1.	Do you like yourself?		
2.	Do you like to talk to people?		
3.	Do you hate yourself?		
4.	Do you like the things you do?		
5.	Do you like to share your toys?		
6.	Do you get blamed for things you don't do?		
7.	Do you like to speak Spanish?		
8.	Do people make fun of you?		
9.	Are you shy or bashful?		
10.	Are you smart?		
11.	Do you like to be by yourself most of the time?		
12.	Do you like most of the kids in this classroom?		
13.	Do most of the kids like you?		
14.	Do you fight with the kids a lot?		
15.	Do most of the kids think you are dumb?		
16.	Do you like your teacher?		
17.	Does your teacher like you?		
18.	Does your teacher help you?		
19.	Does your teacher like all the kids in your class?		
20.	Do your mother and father think you are doing good work at school?		
21.	Do you like your brothers and sisters?		
22.	Do you like the things you do with your family?		
23.	Do you like to live at your house?		
24.	Is school easy for you?		
25.	Are you afraid of school?		
26.	Would you rather stay at home instead of go to school?		
27.	Are the things you do at school interesting?		

Figure 5a

ENSAYO ESTUDIANTIL

INSTRUCCIONES: Del modo que cada uno de nosotros nos sentimos sobre ciertas cosas es importante. Este ensayo te hace preguntas sobre el modo que te sientes tú. Lee cada pregunta con cuidado. Luego contesta cada pregunta según el modo que te sientas hoy, y tan honestamente como puedas. Cuando hayas terminado, pon tú papel en el sobre amarillo que te ensenó tu profesora. Tu profesora no calificará este papel.

Nombre____________________________ Grado____________

Fecha Completado____________ Profesora__________________

	Sí	No
1. Te quieres tú mismo?		
2. Te gusta hablar con la gente?		
3. Te odias tú mismo?		
4. Te gustan las cosas que haces?		
5. Te gusta compartir tus jugetes?		
6. Te hechan la culpa por cosas que tú no haces?		
7. Te gusta hablar español?		
8. Te hacen burla?		
9. Eres vergonzoso?		
10. Eres inteligente?		
11. Te gusta estar a solas la mayoría del tiempo?		
12. Quieres a la mayoría de los niños de este solón?		
13. Te quieren la mayoría de los niños?		
14. Peleas mucho con los niños?		
15. Creen la mayoría de los niños que eres tonto?		
16. Quieres a tu profesora?		
17. Te quiere tu profesors?		
18. Te ayuda tu profesora?		
19. Quiere tu profesora a todos los niños en tu clase?		
20. Piensan tu papá y tu mamá que estás haciendo buen trabajo en la escuela?		
21. Quieres a tus hermanos y a tus hermanas?		
22. Te gustan las cosas que haces con tu familia?		
23. Te gusta vivir en tu casa?		
24. Es fácil la escuela para tí?		
25. Le tienes miedo a la escuela?		
26. Prefieres quedarte en casa que venir a la escuela?		
27. Son interesante las cosas que haces en la escuela?		

Figure 5b

As Witkin and his colleagues did more research with field dependents and field independents they discovered that these two groups of people had different personality styles. Differences between them were observed in both the intellectual and social spheres.

Thus field dependence or independence can be determined through the use of The Portable Rod and Frame Test itself, based on the use of a specially constructed polyethelene plastic box. The box rests on a table, and the child is asked to position his head at one end of the box. Directly in front of him he sees a black frame and a blockrod--both the rod and the frame can be turned independently of each other. The experimenter raises a screen in front of the subject's eyes, and then moves the rod and frame twenty-eight degrees off the vertical. He then lowers the screen and asks the subject to tell him in which direction to move the rod to return it to its vertical position. He warns the subject that the frame will remain tilted so that he ought not guide himself by the tilt of the frame. Subjects are given eight trials, and the score is the average number of degrees error over the eight trials.

CHAPTER SIX

THE INSTRUCTIONAL SUBSYSTEM

A) Introduction

    1) View of the teacher
    2) Relationship to the Learner Subsystem
    3) Adaptability of Instructional Subsystem

B) Teacher Competencies

    1) Personal
    2) Professional

C) Teacher Experiences

    1) Classroom Instructional Strategies
    2) Application of "Cultural Patterns"
    3) In-Service Training Program

D) Teacher Evaluation

    1) Elements of an Accountability System
    2) An "Output Accountability" System

A) INTRODUCTION

1) View of the teacher. As the felt needs and interests of a community ultimately dictate the character of goals and objectives established for students, so do they also affect the nature and shape of the instruction in classrooms. More specifically, the view of the teacher held by a school board, parents, and administrators sharply influences what kind of teaching staff one has. That view can range from seeing the teacher as a mere technician, implementing the educational program, to a more fulsome humanistic orientation, in which the teacher is an active helper and facilitator of children.

In the Triangle Model, a number of demands are posed for the teacher and paraprofessional or aide. Working with bilingual/bicultural children in a complex setting with ambitious goals is a challenging and difficult task, both personally and professionally. Regardless of exactly what objectives, strategies, activities or materials are chosen, the Triangle teacher has many variables to consider if the children are to benefit from the interweaving of the four developmental areas and the application of the cultural patterns to the curriculum.

2) Relationship to the Learner Subsystem. Conceptually, the instructional subsystem is derived from the same general educational philosophy as is the learner subsystem. The view of the child will color the view of the teacher; the choice of objectives for the

student to fulfill fixes the parameters of those competencies needed by adults to support children in meeting their objectives. In sum, whatever flows from the educational position of a district regarding the student also flows a position with implications for the teacher or paraprofessional.

The teacher's responsibility to students ought to be both professional and personal. For example, the student's needs in math, reading, and language require technical and professional understandings and instructional skills on the part of enabling adults. The fourth area, personal development in students, calls for personal attributes and competencies in the adult for interacting with the child. This is graphically represented in Figure 6.

Students need experience in	Teacher responds
Math Reading Language	Professionally
Personal development	Personally

(Figure 6)

Pragmatically, the teacher's relationship is conditioned by the learner objectives. These are prior to the determination of teacher attributes and competencies, and the instructional strategies or operating styles which such attributes and competencies enable an adult to carry out.

3) Adaptability of Instructional Subsystem. As with the learner subsystem, the instructional subsystem is essentially open and responsive to local circumstances. Choices of teacher competency standards, training to achieve those competencies, materials and evaluation to support training and classroom performance will depend on not only the learner subsystem but upon such factors as:

- the district's "view of the teacher"
- resources available for in-service training
- customary practices of evaluation
- selection criteria and credentialling practices determined by law
- enthusiasm and willingness of teachers to meet higher standards
- commitment to bilingual/bicultural education, cultural democracy, etc., accepted in the community and by the individual teacher himself or herself.

As an example of how these factors apply, ideally one might desire a full commitment to bilingual education, requiring at the least a Spanish-speaking teacher. But if resources don't permit that in every class, aides and paraprofessionals might have to be used to compensate for insufficient language ability in some classroom teachers.

1) Personal

The personal characteristics of a teacher involved in a Triangle Program are those possessed by effective teachers in any classroom.

The following list of personal characteristics is a generally representative section of attributes and characteristics of the personally competent teacher:

1. The capacity to be warm and supportive.
2. The capacity to be informal, to allow children to socialize with each other and the teacher as well.
3. The capacity to possess the sensitivity, interest, and enthusiasm for the child's ideas and cultural differences.
4. The capacity to sustain empathetic behavior.
5. The capacity to accept all children and their variances in abilities, judgments, and values.
6. The capacity to raise one's own level of expectations as children attain success and are freed from failure.
7. The capacity to provide the tempering direction towards positive attitudes.
8. The capacity for being patient and possessing a sense of humor.
9. The capacity to demonstrate a commitment to the goals and objectives of a Triangle Program.

2) Professional

The professional competencies of Triangle teachers will be presented in the following categories: Individualization, Bilinguality, Major Topics in Mathematics, Evaluation and The Use of Support Subsystem.

A. Individualization

1. The ability to organize well and to work effectively with students on an individual, small group, or large group basis.
2. The ability to diagnose children's progress and achievement throughout a Triangle Program.
3. The ability to move students from one mode of instruction to another, from the concrete to the symbolic, depending upon their individual learning style.
4. The ability to identify the learning style of the children in the Project.
5. The ability to understand cultural factors which determine learning styles, and appropriate instructional strategies related to them.

B. Bilinguality

1. The ability to function effectively in a bilingual program.
2. The ability to be fluent in the language of the non-English speaking students.
3. The ability of not only being bilingual, but biliterate as well.
4. The ability to understand dialects used in the community surrounding the Project school.
5. The ability to understand the culture of the non-English speaking students.
6. The ability to be sensitive to the importance of the use of the child's dominant language and its vital role of cognitive development and self-esteem.
7. The ability to communicate with the students and the people from the surrounding community.
8. The ability to demonstrate a definite respect for the language of the non-English students and the values of culturally different children.
9. The ability to understand and use the technical terms of math in the language of the non-English student.

C. Mathematics

1. The ability to use whatever new mathematics materials may be utilized in a Triangle Program and to successfully use the materials in the classroom.

2. The ability to understand and use the concepts necessary for teaching elementary mathematics.

3. The ability to teach math via concrete materials and problem solving situations.

4. The ability to relate major topics of mathematics to everyday situations in their childrens' lives.

5. The ability to motivate children in the learning of math.

6. The ability to indicate through personal intervention with children that math can be an exciting experience.

D. Evaluation

1. The ability to diagnose academic deficiencies and to prescribe remediation to correct identified deficiencies.

2. The ability to diagnose affective deficiencies and to prescribe remediation to correct identified deficiencies.

3. The ability to manage a system of diagnosis, prescription, testing, and record keeping.

4. The ability and skills in the manipulation and utilization of various evaluation instruments.

E. Use of Support Sybsystem

1. The ability to work with aides and supportive personnel in accomplishing common educational objectives.

2. The ability and knowledge of means to involve parents in the instructional process.

3. The ability to train parents to teach at home and to assist in the classroom.

4. The ability to prepare materials for parents to use at home.

C) TEACHER EXPERIENCES

1) Classroom Instructional Strategies

The Triangle Model sets out specific behaviors for the teacher or paraprofessional interacting with children in the bilingual/bicultural setting. These are derived from application of the ideas contained in the "cultural patterns" or information/knowledge base to the needs of children in the Triangle classroom. These strategies fall under the following headings:

Non-verbal indications of acceptance
Personalizing
Encouraging Cooperation
Achievement for the Family
Accepting the child's feelings
Showing sensitivity to appropriate sex roles
Eliciting modeling
Cultural highlighting
Using Spanish
Encouraging fantasy
Questioning pupils
Accepting or using pupils' ideas

These areas of behavior obviously require a combination of personal and professional skills on the part of the adult. In the following pages each of these general approaches is outlined in more detail, with specific examples of classroom actions to be taken by the teacher and/or paraprofessional.

1. Non-verbal indications of acceptance

    a. The teacher and associate should communicate with the child through hugs, pats, having them sit on one's lap, meaningful looks, smiles, putting an arm around the child.

    b. They should provide opportunities for the children to work right next to teacher at times, particularly when reading to them or being read to.

    c. The teacher or associate should comfort a crying child by hugging him of that is what he seems to want.

    d. They should be generally "motherly" or"fatherly" with the children.

    e. When children are having a good laugh, the teacher or associate should not feel reluctant to share in their laughter.

2. Personalizing

    a. The teacher and associate should mention personal feelings, likes, dislikes, etc., to the children from time to time.

    b. They should tell them things about their own life, show them pictures of their families, have their families visit the school sometimes.

    c. The teacher or associate should treat the children as individuals. They should take care to know things about them: their favorite color, or food, something they like doing or a visit they enjoy. They should compliment them on their hair ribbons or their new shirts. The teacher should also be sensitive to their home backgrounds.

    d. There should be photographs of the children displayed in the classroom.

    e. The teacher should know and at least mention, if not celebrate, birthdays, particularly in the lower grades.

    f. Lesson material should be related to personal experience wherever possible: math stories can refer to local places, for instance, mentioning a local store instead of just saying "the store."

    g. Feelings mentioned in stories can be related to the children's own feelings.

3. Encouraging cooperation

   a. The teacher and associate should reward with their approval instances of helpfulness and consideration that they see in the classroom. For instance, they should remark on how nice it is to see a child or children helping a newcomer to the room.

   b. The teacher should frequently assign tasks for small groups of children to do together. Friends can cooperate on doing worksheets, measuring, playing games, cleaning up or tidying, taking messages around the school. If there is a lot of quarreling over competitive games, the teacher should try to make more cooperative activities available until the children are able to play the games better between themselves. Murals, wall charts, etc., make good cooperative activities.

   c. The teacher should encourage a cooperative attitude about classroom behavior. He or she should point out that good behavior reflects on everyone in the room, particularly on the playground or when there are substitutes.

   d. Whenever possible, the teacher should discuss behavior problems with the group to try and arrive at cooperative solutions to them.

   e. Cross-age cooperation should be planned; older children should be invited to the room and the children should also invite younger children in from time to time or go to younger classrooms to help. Older children should be used as cross-age tutors for a variety of activities, academic, P.E., games, and with the puppet theater.

   f. The teacher should frequently direct children to each other for help in their classroom work; for instance, they can ask each other how to spell words, how to do expanded notation, etc.

4. Achievement for the family

   a. The teacher or associate should send messages to the child's family expressing pleasure at his achievements.

   b. They should remind the child how proud his family will be that he can read, add, subtract, etc.

c. When talking about when the child grows up, the teacher or associate should mention the child's family; for instance, they could ask the child how his mother will feel when he graduates; the teacher or associate can mention how pleased the family will be when the child is big enough to drive them in the car.

d. The teacher or associate should send work home frequently, reminding the child how pleased his mother will be to see it. They should add a brief note to the work if possible.

e. Teachers and associates should make every effort to meet families personally, and to take any opportunity to express appreciation of what the families do for their children.

f. Teachers can make wall displays out of materials that children have worked on at home with their parents. The teacher can also send work home (such as drawings) and ask the children to bring it back so that she can put it on the wall.

5. Accepting the children's feelings

a. Children's contributions should be accepted even if they occur at inopportune moments. If the teacher or associate cannot stop in the middle of what they are doing to listen to a child they should say politely that they will listen as soon as they have a moment, and then they should make sure that they do so.

b. Children should be free to express their likes and dislikes about activities in the room. It should be possible for the teacher or associate to say, "I know you don't like doing this, but I want you to do it for a little while. After this, we'll do something that you like." That is, the child might have to do something but he should not have to pretend he likes it when he doesn't.

c. The teacher or associate should make their feelings known to the children from time to time, including their needs, fears, and preferences.

d. The teacher or associate should be sensitive to emotional upsets the children may be experiencing and not pressure them to perform as usual if they know of or sense some unusual situation. In other words, a child should be allowed to have a bad day.

e. If a child is out of control for some reason, fighting mad, upset with his work, etc., the teacher or associate should provide him with ways to "unwind." Someone could take him for a walk; he could sit with a friendly person in the Follow Through office; the teacher or associate could get him working at something in the room, suggesting he stay there until he feels calmer.

6. Showing sensitivity to appropriate sex roles

a. The teacher or associate should respect boys' attempts to be "manly" when they show bravery, boast that "It doesn't hurt," etc.

b. They should admire girls' attempts at self adornment ("What a pretty ribbon you have in your hair").

c. They should not assign roles in dramatics that children do not want to play because of sex differences; on the other hand, if they want to play opposite roles, they should be allowed to.

d. The teacher should not force boys to join an activity that they consider to be a girl's activity, nor should girls be forced to join in activities they consider belond to boys.

e. They should not force boys and girls to work together in the classroom if they do not want to. If boys and girls are friendly and cooperative in the classroom, the teacher or associate should not embarass them by making remarks such as, "Is he your boy friend now?"

7. Eliciting modeling

This occurs when a teacher or associate has a child repeat some words or action after them.

a. Modeling is very appropriate in language learning situations for all ages.

b. It is appropriate in all learning situation for children of about seven or under.

c. Teachers and associates should have the child repeat math concepts after them in both English and Spanish.

d. Teachers and associates should frequently show the child how to set out his paper, hold his pencil or paintbrush, etc.

e. The teacher or associate should provide a model of how to print and how to make numbers.

f. The teacher or associate should provide a model of how to lift chairs, put away books, help another person do something.

g. In general, the teacher and associate should frequently demonstrate the kinds of behavior they want from the children.

h. The teacher should not hesitate to recognize a child who is attempting to do something the way the teacher does it ("Mira! You've drawn a flower that looks just like the one I drew").

8. Cultural highlighting

a. Teachers and associates should mention holidays that are celebrated by the local Mexican-American community and hold appropriate celebration in the classroom.

b. The teacher or associate should bring Spanish language magazines, books, comics and newspapers into the room.

c. Mexican foods should be prepared and eaten in the classroom from time to time; the teacher or associate should refer to them where appropriate.

d. The teacher and associate should be aware of celebrations connected with the church that the children in the classroom will know about: confirmations, weddings, etc.

e. Mexican-Americans who are prominent in public life--sports figures, people in government, artists--should be featured in lessons and bulletin board displays.

f. Prominent members of the local community should be invited to the classroom.

g. The teacher or associate should refer from time to time to the extended family, particularly to compadres.

h. Non-Mexican-American children should not feel that their culture (or family) is unrepresented. If there is ever any confusion about which culture is better, the teacher should emphasize differences ("Juanito's mother makes tortillas for his breakfast and Jane's mother makes pancakes.").

9. Using Spanish

   a. The teacher should be careful to use Spanish informally throughout the school day for giving classroom directions, telling little stories to Spanish speakers, etc. He or she should use Spanish diminutives and ways of addressing children. (Miguelito, hijo, nina) and repeat Spanish folk sayings.

   b. The teacher should address other adults in Spanish in order to show the children that the language has prestige among adults. She should be particularly careful to address outside visitors who know Spanish in this language.

   c. The daily story should often be in Spanish or at least contain some Spanish words and phrases.

   d. The class should learn Spanish songs.

   e. The class should learn Spanish nursery rhymes or similar little verses.

   f. All concepts ought to be reviewed in Spanish.

   g. Spanish names should be pronounced correctly.

10. Encouraging fantasy

   a. The teacher and associate should encourage storytelling by telling stories frequently themselves. Stories should sometimes be fantastic.

   b. Dramatic situations should be devised where the child acts as if he is in another situation.

   c. Children should be encouraged to sympathize with each other and with people they hear about in stories ("How do you think Miguelito felt when . . .").

   d. Opportunities should be provided for the children to tell stories about pictures they draw or paint.

   e. The teacher or associate should sometimes set up group fantasy situations; for instance, they could tell the children that they are all sitting on a magic rug that takes them up to the mountains where Juarez was a shepherd. The teacher can tell the children to listen for the sound the sheep make, etc.

f. The teacher should use mood music and pictures to help create fantasies.

11. Questioning pupils

    a. Rather than tell children the answers to their questions, the teacher or associate should help them realize that they probably know at least some of the answer themselves. For instance, they should be encouraged to try and spell a word according to phonics before they are given the correct spelling.

12. Accepting or using pupils' ideas

    a. Teachers and associates should provide opportunities for children to devise their own activities or to help design activities the teacher has decided to do.

    b. If a child adds something relevant from his own experience, they should try to include this experience in the lesson. ("Tell me how your father knows one piece of wood is longer than another piece of wood.")

2) Application of "Cultural Patterns":

To further illustrate the impact of the information/knowledge base upon specific instructional strategies, we will take one variable from the "cultural patterns" matrix, that of field independence/field dependence, and outline what consequences varying learning styles could have for teacher interaction with children. In the following section appropriate teacher behaviors for working with both field independents and field dependents are underlined, with specific suggestions in some places of what teachers and paraprofessionals might say to their students.

FIELD-INDEPENDENT

1. Focuses on task.

    a. Emphasizes importance of task, "If you learn to read these words, you will get a new book."

   b. Reminds students of rules and techniques for completing task successfully, "Remember to add the column on the right first." "You could do it that way, but this way is faster."

   c. Emphasizes curriculum content more than affect in classroom, "You are here to learn, lets get down to the facts."

2. Acts as a consultant or supervisor in the classroom.

   a. Encourages children to work on their own, "Try to do it on your own and if you have trouble, come to me."

   b. Is more detached and impersonal.

3. Formal-lecture oriented approach.

   a. Material flows from teacher to students.

   b. Interaction with students restricted to classroom discussion usually related to course work.

   c. Students must follow strict rules in addressing teacher or asking questions, "I'll answer questions after my lecture. You must raise your hand if you expect to be recognized."

4. Uses impersonal rewards.

   a. Uses tangible but impersonal rewards -- gold stars, grades, special privileges.

5. Encourages individual achievement.

   a. "Because you spelled every word correctly, your paper will go on the wall first."

6. Emphasizes facts and principles.

   a. Focuses on orderly properties of objects and events (rules and laws).

   b. Uses the discovery approach -- "If $\underline{a}$ is given and $\underline{b}$ is this value, what would $\underline{c}$ be?"

   c. Tends to use graphs and formulas in presentations.

7. Emotionally detached.

    a. "If you want to learn, its up to you. All I can do is try to help." "How I feel about it doesn't matter. Are you proud of what you made, Roberto?"

FIELD-DEPENDENT

1. Focuses on needs, feelings, and interests of students.

    a. Sensitive to verbal and non-verbal indicators of feelings, "You are frowning Juan, did I go too fast?"

    b. Attends to special personal needs (supportive of shy child, bolsters self confidence of least successful child).

    c. Is interested in students' personal lives, "I've noticed that you have not been turning your homework in Pedro. Is there something I can do?"

2. Fosters modeling and imitation.

    a. Recognizes children who imitate the teachers, "You made the letter just like I did, Joe."

    b. Tries to form close relationships with students.

    c. Makes feeling and personal references known to students, "I like novels better than poetry."

3. Informal-elicits class discussion.

    a. Material flows from students to teacher as much as from teacher to students.

    b. Interacts with students socially outside classroom.

    c. Atmosphere in class is more informal; open discussion between students and teacher and between other students.

4. Uses personalized rewards.
    - a. Rewards help to effect a closer relationship between students and teacher.
    - b. Physically displays approval (embraces child, nods, winks, smiles, uses approving tone of voice, etc.).

5. Encourages group achievement.
    - a. "Let's work together to become the best class in this school."

6. Narrates and humanizes concepts.
    - a. Attributes human characteristics to numbers and geometrical shapes (as in Sesame Street).
    - b. Uses fantasy and story telling.
    - c. Compares properties of objects and events to qualities of living things.

7. Identifies with class.
    - a. "This is our class. I want us to do well."
    - b. Expresses confidence in ability of individual students and class as a whole. "I know we can do well on this."

3) In-Service Training Program

The major purpose of the in-service teaching program is to help teachers and paraprofessionals acquire the personal and professional competencies which will help them facilitate children meeting their performance objectives in math, reading, language, and personal development.

Perhaps of most obvious importance for the entire area of training for this program is the acquisition by the trainee of a new information/

knowledge base about the Mexican-American children. The teacher must be taught to see that child with new eyes, in terms which respect the humanity and background of that child and his or her environs. This is not meant to disparage in the slightest the background and environs of the Anglo or other children, but to simply reiterate the significance, indeed the necessity, of working with children according to "where they are at," what they are familiar with and what is going to connect up with outside the school in home and community.

Like the potential variability in materials, depending upon the choice of a particular curriculum, the training for Triangle depends on the choice of teacher competencies, which in turn are ordered and selected by the lights of community standards, school resources, and personal and professional enthusiasm and interest and commitment. In this analysis we are thus speaking of training in a general sense, trying to determine what the general concepts of chapter four imply for any in-service program which is conceived and constructed.

Again we must note that the Triangle Model has no wish to attempt to reinvent the wheel, which is to say the mechanics of training, such as logistical arrangements and resources are a presumed responsibility and capability of the school district. Format, setting, and similar variables can be adjusted depending upon the circumstances. Rather than try and dictate form, we are concerned here to leave that to the individual situation and to concentrate instead on some matters of content and substance which we believe ought to be addressed within the in-service program.

The strategy here is to discuss the significance of some of the "cultural pattern" variables upon in-service training in general.

a) Field dependence/independence: perhaps as important as anything the Triangle teacher is taught to do is to learn how to work with children of varying perceptual and intellectual styles. Simply acquiring enough information to recognize the differences will be a substantial task. Thus the training must in the first instance deal with providing sufficient information so that attitudes and approaches may have an opportunity to intelligently form.

How this information is provided can vary with the resources. Direct contact with teachers who are experienced in dealing with children of both modes would be useful, as would videotapes or kinescopes of classrooms where both field dependence and field independence can be seen operating. Next in usefulness would be explanatory written material, charts, diagrammatic outlines and other guidebook or syllabus-type media. These should be supplemented with discussion and perhaps role-playing sessions in which teachers are asked to demonstrate their understanding of the differences in dognitive style.

The entire idea of being a diagnostician will itself be somewhat new to some professionals, who are used to having other people do the analysis and testing of children for them. For example, teachers will have to learn to recognize subtle clues form a child's behavior as to his to her readiness for exploring the alternative style.

b) Personal involvement: this is likely to be the most difficult concept to convey in adult training, primarily because more than any other concept it calls for the interaction with children. This does not mean that the concepts do not hold true for adults as well, only that it is more difficult to talk about applying them to children from a distance, when the children are not there.

Perhaps the emphasis is that attention to the personal competencies is just as important as attention to the professional competencies, even though they are probably less accessible in "training." The child's motivation and interpersonal relating is likely to depend in large part upon the personal attitude of the teacher. The child may perceive professional skill, as children do in assuming there's no problem the teacher can't solve; but more important will be the child's perception of the teacher as a person, a human being, and if that is obstructed by ignorance, neglect, and hostility the child is least likely to be receptive to the academic pursuit of learning math or any other subject.

The importance of the teacher "cueing-in" to the psychological and human factors is indicated by the consensus among experts that such techniques as non-verbal indications of acceptance, personalizing, the encouragement of cooperation, identification with the family, elicitation of emotion, and modeling are excellent instructional strategies as well as personal strategies for the Mexican-American child. Teachers who are not of Spanish origins or experience are particularly in need of this kind of information and experience, through role-playing and direct contact with bilingual children.

The paraprofessionals can make important contributions here, expecially when they are Spanish-culture people who are in classrooms precisely because they have language ability with the children. In training, some pairing of adults may be preferable to working on one's own, as the attitudes and approaches implied here are subtle and complex. It seems desirable to work together in achieving these understandings with someone who can be trusted and who will support the learning efforts with first-hand experience.

c) Bilingualism: the training of teachers for Triangle cannot make Spanish speakers out of those who know no Spanish, but it can require of all teachers and paraprofessionals that some elemental fluency at least related to the pertinent subject matters be demonstrated. Since an objective of the program in some settings might be for the Anglo children to at least learn some words of Spanish connected with mathematics vocabulary, no less should be asked of the teacher. But it must be emphasized that the larger purpose of the program is in fact mathematics, and not language skill on the part of the teacher, and thus it is important for teachers to be well grounded in the one and know as much language as they can, with less than full fluency still being adequate for the Triangle setting.

The reason that more than this cannot be demanded is that a realistic appraisal of schools will reveal that there simply aren't enough bilingual teachers to go around. The heavy dependence on paraprofessionals helps illustrate this fact of life. Therefore we would not want to make the Triangle entirely contingent upon full bilingualism; if an aide with Spanish fluency is in the classroom, the program should still be useful.

For all teachers, both Spanish-speaking and monolingual, the issue of bilingualism as it relates to the children ought to be covered in training. The ability to switch back and forth and to work comfortably in both languages while learning math is a goal for the students that the teachers should be taught to accommodate and facilitate, through judicious assignment, demonstration, use of materials, and problem-solving.

d) Cultural Democracy: the teachers and aides in a Triangle Program would probably devote a considerable part of their training experience to an examination of this concept, since it underlies so much in the program. There are several ways in which the concept of cultural democracy, like that of learning style, could be communicated and assimilated by the trainees: through lecture and discussion, role-playing and dramatization, videotapes, handbooks and syllabi, etc.

Perhaps most fundamental to this aspect of training is the emphasis on attitudes and ambience, things which teachers are often told to think about but which there is difficulty in ascertaining. A battery of measures to evaluate attitudes towards not only Mexican-American children and bilingualism but to change in general should be used in pre- and post-training settings. Teachers must be persuaded that their attitudes can be environmental determinants in many ways, and that they can choose to do something about those attitudes. On the premise that attitudes are informed and humane when they are based on good information, the thrust of training as regards cultural democracy should be to provide that information in abundance.

e) Modes of Bilingual Education: although community and school circumstances may dictate that a particular level or type of bilingual education be implemented, teacher and paraprofessional experience and inclinations may be at some other level. Teachers need to be "re-educated" into the particular realities of a given community, as well as to know what all the alternatives are. Meeting with community people would be a particularly important part of the training to achieve this understanding.

The extent and degree of bilingualism will also have some bearing on the intensity of language training among the teachers. Obviously in a community devoted to Full Bilingualism the levels of proficiency for all teachers might be higher than in a more assimilationist community.

f) The Mexican-American culture: acquainting the trainees with a broad information and experience base regarding the backgrounds and heritages of their students is a major goal of the in-service training model. Again the format and modes may be as varied as resources and imagination permit, the main point being that trainees have to know their children in some special ways that will permit them to work more effectively with them. Background information about the culture, its history, its heroes, and even the evolution of bilingual education would be appropriate. The training should include both quiet reflection and study about these matters through books and study guides as well as discussion and films. This is also an excellent opportunity to use the arts, to show the expressive and creative side of a people and their heritage.

The concept of cultural difference should also be explored in training. It is not an academic issue, but one of real significance in any Triangle Program. Clear distinctions ought to be made between "different" and "disadvantaged." Trainees could be informed as to the kinds of things that have been done in other settings to advance cultural difference, whether for math or other subject matters at the elementary level.

g) Reactions to Majority Culture: teachers and paraprofessionals need to be cued-in to the predominant feelings and principles of a school and community as regards bilingual education. Conflicts should be exposed and discussed and the relative merits of various positions analyzed. Rationalization of the preeminent trend in bilingual education can be explored, and discussion of new patterns which could improve programs also considered.

Essentially this is a matter of attitudes again; teachers and other adults in the classroom ought not to work at odds with but should be in tune with community and home patterns. Towards that end they have to be sensitive to subtle variables often outside the school. One way to do this in training is to try and imagine what it is like to be in someone else's shoes, and to them determine what you would think was best for your children through role-playing, etc.

h) Extended Family and Sex Differentiation: almost all new curriculum programs in schools ask for community support, and talk about teachers being put in touch with home and parents to "involve" the latter in the child's education. This is often lip service to a convenient and desirable but difficult-to-obtain circumstance. However, in this program the importance of the home is special, because of the effect of the extended family in the Mexican-American community. Teachers must take the home into account in dealing with the child, thus it will be essential to be aware of the nature of the family and community relationships.

Undoubtedly this would be one of the most difficult things to communicate in a training program. To develop sensitivity to the extended family would almost seem to require experience with it, yet the training can go far towards making it easier for the uninitiated to understand and empathize. Perhaps the training program at this point could include more than merely sociological and professional educational materials: works of literary art and other vehicles might well serve these purposes of building awareness and understanding.

Regarding the factor of sex differentiation, teachers and paraprofessionals ought to know some general facts about the way the Spanish-speaking family and culture operates, including the roles of men and women, girls and boys. This will assist them in the classroom in some very practical ways, in that they will be able to work with the children without neglecting or violating norms the children bring from home on the one hand, at the same time that they are providing what might be a variant set of norms which are appropriate to a more heterogeneous society and school.

i) Summary: training for a Triangle Program, whether by self-study, workshops, retreats, "institutes" on weekends or evenings, all have the same purpose: to acquaint teachers and paraprofessionals with the bilingual child and the environment in which he lives and functions. Basic instruction in teaching math is not the aim, nor is language or reading the major thrust except insofar as they can facilitate math performance and achievement. The emphasis really is on acquiring broad personal and professional competency as a helper, facilitator, enabler of children. This emphasis is consistent with some of the most current thinking in training, and with the apparent needs of emerging bilingual educational theory.

Another important aspect of training is to introduce teachers and paraprofessionals to the use of particular curricula and materials, thus providing a framework within which the personal and professional growth can take place. The concrete, visible manifestation of a Triangle Program, curriculum and instructional support media, does need to be experienced in training; but perhaps more important for the eventual success of the adult role in a Triangle classroom is the understanding, empathy, personal strength and skill which an informed teacher or aide can bring to bear upon the innumerable complexities of learning, teaching, and interacting in a classroom.

D) TEACHER EVALUATION

1) Elements of An Accountability System

At the present time the term "accountability" is being broadly utilized in the public and private sector. A review of some definitions of accountability is necessary prior to determining the elements of an accountability system.

Lessinger (1970)[1] indicates that "accountability is the product of a process; at its most basic level, it means that an agent, public or private, entering into a contractual agreement to perform a service will be answerable for performing according to agreed-upon terms, within an established time period, and with a stipulated use of resources and performance standards."

Barro (1970)[2] says that the basic premise of accountability is that "professional education should be held responsible for educational outcomes--for what children learn."

Lopez (1970)[3] suggests that "accountability refers to the process of expecting each member of an organization to answer to someone for doing specific things according to specific plans and against certain time tables to accomplish tangible performance results."

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[1] L. Lessinger, "Engineering Accountability for Results in Public Education," Phi Delta Kappan, 52 (1970) 217-25.

[2] S.M. Barro, "An Approach to Developing Accountability Measures for the Public Schools," Phi Delta Kappan, 52 (1970) 196-205.

[3] F.M. Lopez, "Accountability in Education," Phi Delta Kappan, 52 (1970) 231-35.

Alkin (1972)[1] defines accountability as "a negotiated relationship in which the participants agree in advance to accept specified rewards and costs on the basis of evaluation findings as to the attainment of specified ends." The essence of this definition is that a negotiated relationship exists in which each of the participants agree in advance as to the criteria (evaluation findings) that will be used to determine acceptability.

Alkin also considers three types of accountability based on differing areas of participation and responsibility. The three types of accountability are designated as goal accountability, program accountability, and outcome accountability. These types are derived from an attempt to answer the question. "Who is accountable to whom and for what?" In the public sector school boards are accountable to the public for the proper selection of goals; the responsibility for program accountability rests generally with the school administration and other school personnel designated by administration; and teachers are viewed as program operators accountable for the outcomes of their activities within the constraints of the programs with which they have been provided.

Two viewpoints regarding "teacher accountability" bring the issues to be considered in developing procedures for a teacher accountability system for the Triangle Model into focus. One point of view holds that teacher accountability is determined on the basis of input standards for teachers. That is, a teacher is accountable if he demonstrates that he is an able teacher in terms of his ability to teach and by satisfactory application of his skills in terms of the amount of effort put forth on his job. The accountability task under such a viewpoint is to insure the quality of the teacher input. This viewpoint demands that the inputs (teachers) are working an appropriate number of hours using those skills considered to be appropriate.

---

[1] M.C. Alkin, "Accountability Defined," UCLA Evaluation Comment (May 1972).

A contrasting view of teacher accountability is one in which the teacher is urged to be responsible for the quality of student output. Here the teacher is considered as an instructional manager utilizing a program whose capabilities have already been determined; the teacher is held responsible for the outcomes of his management of that program. This approach was adopted in the State of California in the establishment of a standard and uniform system of evaluation of certificated school employees effective September 1, 1972. The task under this concept is to determine whether the teacher has managed the program in such a way as to achieve standards or criteria that might be expected from the program.

Procedures for developing a teacher accountability framework for the Triangle Model should properly include a response to the question, "Who is accountable to whom and for what?"

Since the development and implementation of a Triangle Program is subject to approval of a school board interested in achieving the stated goals and objectives of the Model, goal accountability remains a proper responsibility of the school board. The school board remains responsible to the public, even when implementing an experimental program.

Program accountability for the Triangle Program becomes a responsibility of the school district management, with the school district management being responsible to the school board. The school district management responsibility under program accountability includes the development and/or selection of instructional programs appropriate for meeting the stated objectives of the Triangle Model.

Outcome accountability is the responsibility of the teacher as the instructional manager, being responsible to the school district management. The teacher is accountable for producing program outcomes consistent with pre-selected objectives at a performance standard apprpriate for the instructional program.

Adapting the accountability types to the Triangle Model in graphic form provides a summarization (figure 7):

Accountability Types

	Who is Accountable	To Whom	For What
Goal Accountability	School Board	Public	Goal and Objective Selection
Program Accountability	School District Management	School Board	Development and/or Selection of Insructional Programs Appropriate for Stated Objectives
Outcome Accountability	Instructional Manager (i.e., Teacher)	School District Management	Producing Program Outcome Consistent with Pre-Selected Objectives at a Performance Standard Appropriate for the Instructional Program

(figure 7)

2) An "output accountability" system

A teacher under this system is urged to be responsible for the quality of student output. Imperative in this approach is the development of a clear set of objectives relative to the expected outcomes of the program and the development of acceptable performance standards for pupils participating in the program. A critical issue is the development of a method for the evaluator (school district manager or principal) and the evaluatee (teacher) to mutually agree upon the objectives and the criteria for measuring their attainment.

While the new California system of evaluating certificated employees is an "outcome" based system as previously defined, few operational models exist. Implementation of the Stull Bill, developed by the Alameda (Calif.) County Superintendent of Schools (1972), provides one working model. Certain sections provide information of value in relation to the Triangle Model.

In describing the process of evaluation, Alameda (1972) indicated that as a basis for evaluation, the evaluator(s) must, in cooperation with the evaluatee(s), jointly develop, in written form, standards of performance that will be used in the evaluation provess for that (those) evaluatee(s).

These standards of performance should be jointly developed at the beginning of the year and evaluated at the end of the year. In addition, during the year these standards of performance may be adjusted because of changing conditions in the job situation.

For example, this may be a standard of performance established at the beginning of the year:

> "In Miss Jones' class, 90% of the students will show improvement in relating effectively with each other as measured by a socio-metric device developed by the teacher."

During the year, however, six children move out of the class and ten new children move in. Thus the standard of performance may be changed to this:

> "In Miss Jones' class, 80% of the students will show improvement in relating effectively with each other as measured by a socio-metric device developed by the teacher."

The standard of performance can be lowered or elevated depending on the make-up of the pupil group.

The following procedures are suggested for placing tentative standards of performance and activities on the district evaluation form and conferring with the evaluator:

1. Teacher reviews grade level or other curriculum guides to determine school and district objectives for the grade level or for the age grouping. Teacher reviews the job description.

2. Teacher reviews records of the class to determine pupil characteristics, achievement levels, behavior patterns and instructional and personal needs.

3. Teacher develops tentative pupil standards of performance in some priority order which will meet the perceived cognitive, affective or psycho-motor needs of the class. The number of standards of performance should be limited to those that meet significant needs.

   For example:

   "By May 1973, my class will score 1.8 average grade placement in reading on the Cooperative Primary Test."

   "By June 1973, this class will have shown a 15% increase in favorable attitude toward reading as measured by the San Diego Reading Attitude Test."

> "By June 1973, 90% of my class will have learned the skills in the following games and activities: (teacher would complete this list). Assessment will be made jointly with other grade level teachers and/or the physical education supervisor."
>
> "Other standards of performance should be included which meet the significant instructional needs of the class."

Alameda also developed several forms which can be used in this evaluation process. An initial form included as figure 8 is provided for the teacher to identify goal indicators. They define goal indicators as statements describing the conditions of human behavior which support goal statements. Figure 9 is a form used for the teacher to develop objectives. An objective is defined as a devised accomplishment that can be verified within a given time and under specifiable conditions which, if attained, advances the system toward a corresponding goal. Figure 10 provides a form for the teacher to describe individualized standards.

Goal Indicators:

Determine goal indicators in your several areas of responsibility as specified in your job description. Goal indicators must relate to each of the goals adopted by the governing board.

These goal indicators may, in many cases, be similar for all persons with the same job description; i.e., elementary principals. In this case, goal indicators for a given classification may be developed jointly by the employees in that classification and included in the basic planning document prior to distribution.

(See ISB, pp. 10-15 for examples of Goals and Goal Indicators.)

Goal 1: ______________________________

____

Goal Indicators for Goal 1 in my area of responsibilty are:

A. ______________________________

____

B. ______________________________

____

C. ______________________________

____

D. ______________________________

____

E. ______________________________

____

Goal 2: ______________________________

____

ETC.

The above Goal Indicators have been reviewed and agreed upon.

______________________ Supervisor

______________________ Employee

REVIEW YOUR GOAL INDICATORS WITH YOUR SUPERVISOR BEFORE PROCEEDING.

(Figure 8)

Objectives:

For each goal indicator agreed to by you and your supervisor, there should be developed standards of pupil performance. These are "objectives" and are measurable against some established criteria. Objectives describe what can reasonably be expected of pupils at certain levels and in the specific areas of human growth and development.

Again, objectives may be similar for many people with the same job description; i.e., third grade teachers; and can be developed jointly by the employees in a given classification and distributed to them in the basic planning document.

(See ISB, pp. 16-21 for examples of objectives.)

Goal 1: ______________________________

____

Goal Indicator 1A: ______________________________

____

Objective 1: ______________________________

____

Objective 2: ______________________________

____

Objective 3: ______________________________

____

Goal Indicator 1B: ______________________________

____

Objective 1: ______________________________

____

ETC.

The above Objectives have been reviewed and agreed upon.

______________________ ______________________
Supervisor Employee

REVIEW YOUR OBJECTIVES WITH YOUR SUPERVISOR BEFORE PROCEEDING.

(Figure 9)

Standards of Performance:

Your standards of performance, unlike goal indicators and objectives, are individualized standards. They describe the conditions of your satisfactory service; i.e., when the standards of performance have been achieved, you have provided satisfactory service. Standards of performance are affected by the students within your area of responsibility, and by the support services with which you are provided. Your standards of performance should be written in such a manner that you and your evaluator will know the degree to which you have attained them. Your standards of performance should include standards of student achievement, the learning environment, student control and other duties. You should also include here, those support services you believe are necessary to achieve your performance standards.

Student Achievement:

1. (See ISB, pp. 22-25, 88 for examples.) ______________________

   ____

   to support Goal Indicator ________. This Goal Indicator is

   an extension of Goal _______.

2. ____

   ETC.

Learning Environment:

1. ____

   ETC.

Student Control:

ETC.

Other Duties:

ETC.

Support Services:

ETC.

The above Standards of Performance and Support Requirements have been reviewed and agreed upon.

______________________ Supervisor

______________________ Employee

REVIEW YOUR STANDARDS OF PERFORMANCE AND SUPPORT REQUIREMENTS WITH YOUR SUPERVISOR BEFORE PROCEEDING.

(Figure 10)

Instruments will especially be required to record the progress of teachers towards assimilating the appropriate instructional strategies and cultural patterns for bilingual/bicultural classrooms. An excellent exemplar of such a device is the "Cultural Matching Teaching Strategies Observation Form" developed by the Riverside (Calif.) Culturally Democratic Learning Environments Project. It enables the teacher through self-evaluation to incorporate bilingual/bicultural teaching strategies into his or her repertoire. The form is displayed in figure 11. A second form, also for self-evaluation, deals with "Sensitivity to Mexican-American Values"; the teacher or paraprofessional should test their own notion of truth or falsity against the answer provided in the margin (figure 12).

CULTURAL MATCHING TEACHING STRATEGIES

Non-verbal indications of acceptance	Personalizes: mentions personal experience	Encourages cooperation	Uses Spanish	Praises or Encourages

Accepts or uses pupils' ideas	Elicits modelling	Encourages fantasy	Cultural highlighting	Achievement for the family

Assigns inappropriate sex roles	Rejects feelings	Asks rhetorical questions

Instructions: Observe Teacher for five consecutive minutes. Then write one of the following words under each heading: Almost always, Often, Sometimes, Rarely, Never. Note that high frequency of occurrence is desired in all but the last three categories.

SENSITIVITY TO MEXICAN AMERICAN VALUES

Answers in margin indicate sensitivity to Mexican American values.

False 1. A Spanish-speaking child must sooner or later learn either to prefer English or give up Spanish altogether.

False 2. Most Mexican American families restrict intellectual growth by encouraging loyalty to the family and adherence to tradition.

False 3. A child should follow his conscience, if he believes his parents are wrong he need not obey them.

True 4. It is all right for a child to feel that his father is the final authority in all matters.

False 5. A child whose family celebrates Mexican holidays will never learn to feel like an American.

True 6. It is all right for children to be brought up to feel that they should care for their parents when they become older.

True 7. It is all right for a young boy to avoid altogether work or activities that he views as feminine.

True 8. Children should be as concerned with pleasing their parents as they are with pleasing their teachers.

False 9. A child who doesn't put competition above cooperation will eventually fail.

False 10. A child should be encouraged to be very competitive even though this may make enemies for him.

True 11. Mexican Catholic ideology provides an acceptable interpretation of one self and other people.

True 12. Children should never disappoint their parents.

False 13. If Mexican Americans are to become good Americans they must learn English and forget Spanish.

False 14. Mexican American parents are not interested in the education of their children.

False 15. Research shows that learning two languages interferes with intellectual development in children.

True 16. In general, Mexican American children differ in learning styles from Anglo American children.

False 17. Bilingual education and English as a Second Language programs strive to achieve the same goals.

True 18. Mexican Americans from traditional families are motivated to achieve for their families.

False 19. The same educational program should benefit all Mexican American children.

True 20. Mexican American children from traditional communities perform better under conditions of cooperation rather than competition.

False 21. The Independence of Mexico is celebrated on May 5th.

False 22. Mexican American children usually respond best to a cold, formal approach from teachers.

CHAPTER SEVEN

THE SUPPORT SUBSYSTEM

A) Introduction

B) Administrators and Other Schoolpeople

C) Parents and Community

A) INTRODUCTION

The Support Subsystem of the Triangle Model consists of guidelines for various potential supporting components to the Learner and Instructional Subsystems. The role of these support components is to facilitate the development and implementation of classroom Triangle programs, through goal-setting, learning-activity selection, materials development, support of training activities, and evaluation.

These managerial and support functions are carried out by school-district and community-based persons, as described in this chapter.

Basically, the Support System has two major functions;

1) To provide administrative and logistical assistance assistance for the Triangle Program.
2) To provide contact between the Triangle Program in a school and the parents and community people.

The following sections of this chapter deal with each of these major functions.

B) ADMINISTRATORS and OTHER SCHOOLPEOPLE

In addition to the interest and skills of the instructional staff in a Triangle setting, other adults will also influence a bilingual/bicultural classroom through their attitudes and behind-the-scenes participation in the program. School principals, curriculum supervisors, senior teachers with planning responsibilities, subject-matter specialists and others are unavoidably involved in any program taking place in the school, even if it is only to the extent of holding some attitude towards it (which can influence degree of success or failure).

The guidelines proposed here should be kept in mind by any curriculum-development or program-planning team as meriting attention depending upon the individual circumstances of any particular district or school. For example, in a district with bilingual/bicultural programs already under way, or possessing a history of them, it may not be as necessary as it is in districts or schools unfamiliar with such programs to provide full backgrounding and information about the general purposes of bilingual/bicultural education and similar considerations.

The following guidelines are recommended by the Triangle Model for establishing a support component among administrators and other schoolpeople:

1) Determine whether such personnel have any experience with previous bilingual/bicultural programs.
2) Prepare a brief oral or written summary of the general purposes and components of a Triangle Program for presentation and discussion.
3) Seek information on other bilingual/bicultural program options for comparison with the Triangle Model.

4) Request participation in the proposed program by offering some specific role, as a policy or goal-setter, evaluator of teachers, planner or instructor in the in-service training component, interpreter of the program to other schoolpeople and parents, etc.

5) Design a schedule of events leading to the development and implementation of a Triangle Program, with various administrative decision-points landmarked and the possible contributions of other schoolpeople outlined.

Some ways in which administrators and other schoolpeople can contribute to a Triangle Program are as follows:

1) Help secure support from district or other school officials for a Triangle Program.

2) Help identify and locate resources which can be utilized in the Program.

3) Help make arrangements for meetings, obtaining materials, and other logistical duties.

4) Help build the information/knowledge base by providing expertise for teacher-training in communicating expertise on bilingualism or other cultural-pattern factors through participation in the in-service training program, consultation with teachers, etc.

5) Help teachers and paraprofessionals design accountability standards for their own performance, and assist in the evaluation process.

6) Help interpret the Program to parents and community persons.

7) Help build teacher morale with personal and professional encouragement and recognition.

C) PARENTS and COMMUNITY

The Triangle Model calls for participation and support of parents and community for the bilingual/bicultural thrust of a Triangle Program. To stimulate interest in and support of Triangle the following guidelines are recommended for the design of parent and community activities:

1) Assess parent and community needs and feelings; identify resource people according to their expertise.
    a) Include all levels of the community, and conduct programs to educate the community concerning the philosophy of the project in the language of the community.
    b) Identify bilingual/bicultural resources, and use home meetings of leaders to recruit resource people (parents and students should be included as resource people).
2) Keep lines of communication open among parents and community members. Frequent communication improves relationships and reinforces activities in project.
    a) At Home - all bilingual staff should visit homes to explain project and to inform parents of successes of students. Parents choose the meeting place. Schools in project will release teachers for visitations.
    b) At School - Always maintain a warm welcome when parent visits school. Visits should be conducted in the language of the parent.
3) Conduct all meetings bilingually.
    a) Provide bilingual student guides stationed in halls so that parents will be able to find their way to special meetings or gatherings.
    b) Have informal family get-togethers. Baby-sitting should be provided. Children must always be welcomed in the classrooms with their parents.

Evaluation of the parent-community support component is based upon two procedures: observing direct behavior of parents and community people with respect to the program; and investigating attitudes and opinions of those people. The first can be done by devising a checklist to be used by teachers, school principals, and others associated with the school. This checklist could simply ask for evidences of visible parent or community involvement, such as the following:

1) visits to Triangle classrooms;
2) requests for information about the program;
3) attendance at meetings where the program is described and explained;
4) questions asked of a child's teacher about the Triangle developmental areas;
5) assistance rendered of a material or other kind to some component of the program, such as in-service training.

In addition to the data which could be obtained from observations of parents and community people, systematic inquiry through attitudinal or other questionnaires or interviews might also help determine the pulse of opinion and support outside the school. For example, an excellent model of possible parent interview forms is provided on the following pages, derived from the Long Beach, California, School District (Figure 11).

PARENT INTERVIEW FORM

Demonstration Programs

(Reading / Mathematics)

How do you do, Mr. / Mrs. ______________. My name is ______________,
and I am a ______________ at your son's / daughter's school, Franklin Jr. High.

We are trying to find out whether our school is giving our students the kind of education that parents want for their children. I don't know whether you know it or not, but Franklin has been given extra help again this year, and we want to be sure we are on the right track with these new programs. That is why I'd like to ask you a few questions today about our school.

Now before I start, I want you to know that we are going to ask about sixty other parents these same questions, and then we will put all their answers together so nobody will ever know which answer is yours. I think we can finish this in about fifteen minutes, so if you don't mind, I'll start right in with the first question on my list.

(Identification: Not all of these questions need to be answered by the respondent. Use school files to obtain basic information.)

Student's name: ______________________________

Address: ______________________________

Respondent's name: ______________________________

a) Respondent's relationship to student is:

______________ father
______________ mother
______________ grandmother
______________ other (explain ____________)

b) (Optional) Any additional general identification information that you believe would be helpful in interpreting this respondent's answers:

____

____

____

(Figure 11)

Parent Interview, Demonstration Program

1. To what extent do you know about the special reading and math programs at Franklin Junior High? (Check as many as apply.)

Math	Response	Reading
	I am very well-acquainted with both programs.	
	I would like to know more.	
	I know very little.	
	Other (specify):	

(Perhaps the interviewer could set up an appointment to return to the home to explain the programs to the respondent.)

2. Have your son's/daughter's classes provided enough or not enough of the following?

Item	Enough	Not Enough	Don't Know
a. Individual help from the reading teachers			
b. Individual help from the math teachers			
c. Materials to work with in class			
d. Reading instruction that is really useful to your son/daughter			
e. Math instruction that is really useful to your son/daughter			
f. Variety of activities to help your son/daughter learn . . .			
g. Instruction in oral expression			

Parent Interview, Demonstration Program

3. Do you know your child's teachers in the Demonstration Programs?

Math		Response	Reading		
Classroom	Lab		Classroom	Labs	
				Theater	Science
		Well enough to talk to			
		When I see him or her			
		I don't know any of them			
		Other (specify):			

4. Do you receive the information you need, to know the extent of progress your son/daughter is making in the Demonstration Programs?

Math	Response	Reading
	Yes, I am always aware of his/her progress	
	Most of the time I know how well my son/daughter is progressing	
	I would like to receive more information from his/her class	
	I would like to have a conference with his/her teacher	
	Other (specify):	

Parent Interview, Demonstration Program

5. How much help do the Demonstration Program people give your child with his/her work at school?

____________________ All the help he/she needs

____________________ Most of the help he/she needs

____________________ They don't seem to have time to help

____________________ They don't bother to give any help

____________________ Don't know

6. Do you know about services and special help available to your child?

____________________ Counseling

____________________ Testing

____________________ Tutoring

____________________ Conference with school nurse

____________________ Eye and dental examinations

____________________ Other response (Please explain) ________________________

____

____

7. Do you feel that the special reports the reading teacher has filled out on ______________________________ and sent home to you have been of value?

__________ Yes (They help me understand how well my son/daughter is doing in class.)

__________ No

__________ I don't have time to read them

__________ Other response (Please explain) ________________________

____

8. Does your son/daughter spend much time at home reading?

__________ Yes (If yes, what does he read?)

    ______ The newspaper
    ______ Magazines (including comic books)
    ______ Books from the public library
    ______ Books from the school library
    ______ Books from the classroom
    ______ Books from home
    ______ Other response (Please explain) ____________________
    ____

__________ No

__________ Other response (Please explain) ________________________________

____

9. Do you think that ________________ is getting all the help he/she needs in learning to read (improving his/her reading)?

__________ Yes (I think so. They give him/her lots of help.)

__________ No

__________ He doesn't need help

__________ Don't know

__________ Other response (Please explain) ________________________________

____

10. Do you feel that the special reports the math teacher has filled out on ______________________________ and sent home to you have been of value?

_________ Yes (They help me understand how well my son/daughter is doing in class.)

_________ No

_________ I don't have time to read them

_________ Other response (Please explain) ______________________________

____

11. Do you think that _______________ is getting all the help he/she needs in learning mathematics?

_________ Yes (I think so. They give him/her lots of help.)

_________ No

_________ He doesn't need help

_________ Don't know

_________ Other response (Please explain) ______________________________

____

12. From time to time there are things going on at the school that parents are invited to. So far this year, have you gone to any of these things?

Event	Yes	How often?		No
		Often	Sometimes	
PTA meetings				
Parent evening classes in math and reading				
Programs (i.e., talent show, orchestra, glee club)				
Teacher conference				
Open House (Public Schools Week)				
Classroom during school				

Have attended nothing _______________

Parent Interview, Demonstration Program

13. If you have not attended many school functions, was it because of

_________ Baby-sitting problems?

_________ Conflicting work hours?

_________ Lack of time to go?

_________ Other response (Please explain) ______________________

____

14. Do you receive information regularly from the school? ____ Yes ____ No
If yes, what is the source?

_________ Monthly Newsletter

_________ Special bulletins announcing school activities

_________ Notes from the classroom teachers (other than report cards)

_________ Special reports from math and reading classes

15. Is there additional information you would like to receive regarding school events?

____

____

____

16. Do you believe your child has had greater success in school this year because of receiving special help in the areas of reading and math?

_________ Yes

_________ No

_________ Haven't noticed

If your answer to the above is yes, in what way have you noticed this success?
____

____

____

Parent Interview, Demonstration Program

17. Before I go, is there anything that I haven't asked you about our schools that you would like us to know?

__________ Yes (Record response below)

__________ No

____

____

____

____

____

Thank you for your time. It's been nice talking with you. I hope you can visit our school sometime.

CHAPTER EIGHT

SUMMARY AND RECOMMENDATIONS

A) The Triangle Program

    1) The Problem

    2) The Response

    3) Genesis of this report

B) The Triangle Program Planning Project

    1) Assumptions

    2) Goals

    3) Strategy

    4) Organizing ideas

C) Introduction to the Triangle Model

    1) Structure

    2) Features of the Model

    3) Delimitations

    4) Definition of terms

D) Cultural Patterns

    1) The Mexican-American Culture

    2) Bilingualism

    3) Relationship to the Majority Culture

    4) Cultural Democracy

    5) Field dependence and field independence

E) The Learner Subsystem
    1) Educational philosophy
    2) Goals and objectives
    3) Learning experiences
    4) Evaluation

F) The Instructional Subsystem
    1) View of the teacher
    2) Competencies
    3) Teacher experiences
    4) Evaluation

G) The Support Subsystem
    1) Introduction
    2) Administrators and other schoolpeople
    3) Parents and community

H) Recommendations for Utilization of the Triangle Model
    1) Determine need and securing support
    2) Establish curriculum development capability
    3) Assess resources and existing programs
    4) Plan and design a Triangle Program
    5) Establish a program management capability
    6) Implement the Program
    7) Evaluate and revise the Program Design

I) Proposal for Next Phase

A) THE TRIANGLE PROGRAM

1) The Problem: Although the nation has poured tremendous efforts into compensatory education, the plight of those children for whom English is a second language remains severe. Spanish-speaking students, including the large component of Mexican-American children, fall further behind in all areas of school performance because of their uneven proficiency with communication skills, fundamental to the learning of mathematics and other basic competencies. In addition, learning activities, support materials, and instructional strategies are often designed without giving due consideration to various cultural factors and influences that affect the bilingual/bicultural student. Special programs are needed to remedy this situation and to provide equal educational opportunity for these children.

2) The Response: Several programs of recent years or some now underway are making strides towards providing better educational opportunities in fundamental skill areas for the bilingual/bicultural student, especially at the elementary level. But these programs need to be expanded and supplemented by even more comprehensive efforts. A strategy for systematically building a major new bilingual/bicultural program would involve three phases: planning (to design a Model), development (to apply the Model in the light of local circumstances), and implementation (to carry out the program derived from the Model).

3) Genesis of this Report: This tripartite strategy of planning, development, and implementation was initiated by Communication Patterns,

Inc., a San Francisco-based private educational consulting firm, in the Spring of 1972. Communication Patterns created the concept of the Triangle Model (to be outlined below) after discussions over several months with bilingual/bicultural educators in school districts and government offices at both the state and federal level. A proposal was formulated and submitted to the federal Office of Education. Support was secured for the first phase, the Planning Project, in June 1972. Thereupon Communication Patterns conducted over the summer months and into the fall of 1972 a planning project designed to yield a Triangle Model which might serve as the basis for development and implementation of a program.

B) THE TRIANGLE PROGRAM PLANNING PROJECT

1) Assumptions: The design and operation of the Planning Project proceeded on the basis of two major assumptions which were formulated after considerable discussion with bilingual/bicultural experts, and a search for a frame of reference upon which to base the planning. These assumptions included the following concepts:

a) The pluralism of bicultural communities demands that the Model provide flexibility and choices from one Spanish-speaking community to another.

b) Guidelines rather than mandatory prescriptions provide the kind of assistance these varied communities require. These specifications can guide the development of programs in different contexts or settings.

2) Goals: As the planning phase for a Triangle Program, the Planning Project sought to design a Model which would provide to a school district development team specifications for:

a) student competency-based performance objectives in mathematics and other critical areas, as well as the activities, materials, and evaluation procedures necessary to support those objectives.

b) personal and professional competencies required of the teacher and paraprofessional in the Triangle classroom, as well as appropriate instructional strategies, in-service training and evaluation procedures necessary to support the acquisition of those competencies.

c) administrator, parent, and community support of the program.

3) Strategy: The design strategy adopted for carrying out this planning phase and developing a Triangle Model included operationalizing the proposal by allocating task assignments to a team of consultants, seeking input relevant to different parts of the Model, reviewing and analyzing this input creating a preliminary design of the Triangle Model, submitting the Model to a team of school reviewers for feedback, and revising the Model and preparing this Final Report.

4) Organizing Ideas: At the point where data began to come in from the consultants, a design and writing team worked out a preliminary Model. Their efforts were structured by a number of organizing ideas for design of the Model, including the use of individualized/competency-based objectives, interactive developmental areas such as reading and language

to accompany the mathematics objectives, considerations of the personal growth and development of students, and the influence of various cultural patterns for the bilingual/bicultural setting.

C) INTRODUCTION TO THE TRIANGLE MODEL

1) Structure: The Triangle Model is designed around two major components:

a) An information/knowledge base ("cultural patterns") which makes explicit the most significant cultural, social, economic, and political variables that influence bilingual/bicultural situations. These "cultural patterns" are likely to vary from one community to another. They should influence such curriculum development choices as determination of objectives, student learning activities, instructional support materials, teacher instructional strategies, and evaluation.

b) A tripartite series of subsystems which form the core of the Model, including specifications for the development of Learner, Instructional, and Support components in a Triangle Program. This structure is intended to provide a manageable framework of areas to be developed and responsibilities to be attended to by a school district development team.

2) Features of the Model: The Triangle Model sets forth a number of considerations and specifications which ought to guide the development of a comprehensive bilingual/bicultural educational program for elementary-level Spanish-speaking students, particularly Mexican-American

children. It is offered as one possibility, and not as a cultural panacea for all the problems of bilingual education in this country. However, it is unique in that it is the first Model in the bilingual/bicultural field to articulate a value system (the "cultural patterns") which is to be systematically and explicitly applied as a standard for making a wide range of curriculum development choices.

3) Delimitations: It is also important to say what the Planning Project and the Model did not intend to do. There exists a number of constraints: the level of generality was chosen as appropriate for a set of guidelines which might be useful in very different settings; users (i.e., school districts) are presumed to have capability for such various general functions as curriculum and program development (i.e., the Model does not tell how to organize a teacher training workshop or how to write behavioral objectives); the information/knowledge base presented herein is meant to be only an examplar of "cultural patterns" (i.e., everyone can choose their own, but the point is to articulate and apply some); and, the population described within the context of "cultural patterns" and the subsystems is limited to the Mexican-American student, for reasons of specificity, but in the larger sense could be adapted for other Spanish-speaking populations such as Puerto-Rican Americans.

4) Definition of Terms: This report utilizes various "systems terms" such as "model", "sybsystem", and "exemplar", and such "contextual terms" as "bilingual/bicultural education", "Mexican-American student", and

"majority culture." These were briefly defined, for purposes of this report only, in chapter three.

D) CULTURAL PATTERNS

1) The Mexican-American Culture: This classification applied to people of many ethnic variations, having in common a Mexican descent. The "Mexican-American, the "extended family", and sex differentiation are each separately discussed as part of this cultural pattern in chapter four.

2) Bilingualism: This cultural pattern includes consideration of alternative views on bilingual education, regarding degrees of fluency and patterns of "cultural habits." The section in Chapter 4 provides a range of purposes for bilingual/bicultural education, and definition of some terms commonly used in the field.

3) Relationship to the Majority Culture: A critical variable can be the relationship of a Spanish-Speaking community to the larger communities of which it is a part. This includes reactions to the American "core culture" (i.e., English-based), including such possible postures as "retentionism", separatism", "assimilation", and "biculturalism." This section also explores various modes of bilingual education, including a spectrum running from "Transitional Bilingualism" to "Full Bilingualism."

4) Cultural Democracy: This concept has found great favor in recent years among bilingual/bicultural educators. It refers to the right of children to be different while at the same time being a responsible

member of a larger society. As a consequence, schools and other institutions must change in their orientation to cultural differences.

5) Field Dependence and Field Independence: These concepts describe the predominant intellectual, psychological, and emotional orientation through which a child operates in his or her environment. They may have very significant consequences for school achievement. For example, teachers and paraprofessionals must be well acquainted with the characteristics of both field dependence and field independence in order to carry out appropriate instructional strategies in the varied atmosphere of a bilingual/bicultural classroom.

E) THE LEARNER SUBSYSTEM

1) Educational Philosophy: The point of departure for any educational program ought to be the general educational philosophy of a community. This includes a point of view about children and the goals which the community holds for them. On the basis of a study of needs, a policy can be articulated. From this policy specific general objectives can be designed to guide the development of an instructional program. This in turn may lead to a commitment and point of view about bilingual/bicultural education. This philosophy ought to be codified in specific goals and objectives that enable curriculum and program developers to maintain a consistent frame of reference with the community which they ultimately serve.

2) Goals & Objectives: Sets of student performance objectives are delineated by the Triangle Model. They are exemplars of the nature and scope of competency-based objectives which ought to be selected for a Triangle Program. School districts may choose these or similar objectives, depending upon their own goal-setting achievements or inclinations. These objectives are to be designed in four developmental areas, all of which contribute to the growth and education of children in the bilingual/bicultural classroom: mathematics, language, reading, and personal development. These are detailed in Chapter 5; some 744 specific competency-based objectives are offered by this Model.

3) Learning Experiences: This section provides some guidelines for developing student learning activities which will help students achieve their performance objectives. These will vary as the objectives themselves vary, and according to the resources and extent of curriculum development work in a district. The guidelines for designing student experiences in mathematics and the other developmental areas include consideration of educational philosophy, goals and objectives of the Triangle Model, cultural patterns (the information/knowledge base), organizing ideas such as the concept of interactive skill areas, and sources for activities as they are available in a particular district (i.e., kits, commercial packages, etc.)

"Student Learning Experiences" also includes specifications for the development of materials to support learning activities. The Model sets forth, in Chapter 5, an example for a development team of how the "cultural patterns" can be applied to considerations about materials. Such variables as field dependence-independence, cooperation-competition, bilingualism, cultural democracy, and the extended family are shown to make conceptual and practical contributions to the design of the learning materials. A variety of criteria for materials development are then elicited, including "linguistic appropriateness", "personal involvement", "physical attractiveness," and other factors.

4) Evaluation: This section of the Triangle Model considers the appropriateness of both achievement-based and criterion-referenced tests for student evaluation in the Triangle classroom. A synthesis of the two modes is described to handle different phases of the assessment task, including pre-test, in process, and post-test evaluation. Additionally, the section lists some standard instruments in each of the four developmental areas.

F) THE INSTRUCTIONAL SUBSYSTEM

1) View of the Teacher: The educational philosophy of a community, as manifest in a school district's articulation of purpose and goals, ought to include a point of view about the role and function of the teacher. This ought to flow logically from the community's aspirations for and point of view concerning their children. Thus the relationship to the learner subsystem is strong, with personal and professional competencies required of teachers following from those student needs to which student performance objectives are addressed. The adaptability of the entire instructional subsystem depends upon this view of the

teacher, as well as upon such other consequent factors as resources for training, customary evaluation practices, and the interest and enthusiasm of the teachers and paraprofessionals themselves.

2) Competencies: The Triangle Model lists various competencies which are consistent with and intended to support Triangle student objectives. These include personal characteristics and professional competencies in the areas of individualization, bilinguality, mathematics, evaluation, and use of the support subsystem.

3) Teacher Experiences: These are described in the Model in terms of the two settings which are relevant to a Triangle Program, in the classroom and in teacher training. Classroom instructional strategies which are suitable for bilingual/bicultural children are offered, with specific behaviors suggested for such general attitudes as "personalizing," "accepting the child's feelings," "eliciting modeling," and using Spanish." This section also applies the critical cultural pattern of field dependence/independence to specific instructional strategies to illustrate how such variables may be used in determining appropriate teacher classroom behavior. The thrust of an in-service training program is also elicited by application of various cultural patterns to the general concept of training for bilingual/bicultural teaching. This discussion touches upon the relevance of cultural democracy, modes of bilingual education, extended family and sex differentiation, and other variables.

4) Evaluation: The teacher evaluation system of the Triangle Model consists of awareness and exploration of the various elements of accountability, with a recommendation for an "output accountability" system. Some sample forms are provided which could be adapted by individual districts.

G) THE SUPPORT SUBSYSTEM

1) Introduction: The purpose of the support subsystem is to provide guidelines for involvement of administrators and other educators, and parents and community persons in the Triangle Program. Specifically, the support components are meant to provide administrative and logistical assistance for the program and to establish lines of contact between the Triangle Program in classrooms and other people in the school and in the community outside the school.

2) Administrators & other school people: School Principals, department heads, curriculum supervisors, subject specialists, non-Triangle teachers, and other adults in the school will be unavoidably involved with any new program taking place within their districts. Guidelines are proposed for the program development team to identify, secure, and maintain the interest and support of these persons, including preparation of informational materials and requesting participation in some aspect of the program. Suggestions are offered for various functions which could be carried out by school people to assist the implementation of a Triangle Program, including policy support at higher levels, securing resources, building the information/knowledge base, interpreting the

program to parents and others, and building teacher morale.

3) Parents & Community: The Triangle Model suggests a sequence of activities to be carried out by program developers and or other schoolpeople in involve adults from outside the school. These people may be the children's parents or other people in the community with an interest in bilingual/bicultural education. This part of the Model also specifies an evaluation component, including interviews of parents and community people about the Triangle Program (some checklist items are listed), and systematic attitudinal surveys of such persons to help delineate the pulse of opinion and feeling outside the school about the program. Some sample forms for this purpose are provided.

H) RECOMMENDATIONS FOR UTILIZATION OF THE TRIANGLE MODEL

1) Determine need and secure support: The first item a district administrator, curriculum person, teacher, or other interested party to change in the school must ask is: What need exists for a bilingual/bicultural program in our school or district? The characteristics of the Model add up to a fairly ambitious and wide-reaching attempt to establish a multi-faceted program. The project's first recommendation is, therefore, that potential users of the Model ask themselves whether the outlines of a program as presented

in this model are appropriate in their own community. What is presented herein constitutes guidelines by which individual schools or districts can develop their own curriculum and other program choices. Ultimately the application of this Model depends upon a particular community's determination of whether they need the kind of program which would be likely to be elicited by this Model.

When a needs assessment has been made, individuals or groups interested in pursuing developmental and eventually implementation phases of Triangle ought then to locate and organize support for the idea in a school or district. This means giving wider circulation to the Model, whether in the form reported here or some adaptation of it, the pursuit of key administrator endorsements in the education hierarchy, and laying plans for actually moving into the development phase. This could include devising a time schedule, making preliminary budgetary estimates, and beginning to line up the personnel resources for further action.

2) Establish curriculum development capability: This second step includes both the identification and selection of personnel for the development phase, and the determination of procedures and operations for their functioning (i.e., facilities, budget, etc.) The capability intended here is one which can assume the responsibility of taking the Triangle Model and using it as a blueprint for designing an operational program for that particular district. It would involve such tasks as understanding and interpreting the

Model, conducting various data-gathering operations, evaluating such data relevant to the Model, planning and designing the subsystem components, conceptual testing of the program, and organizing for implementation.

Schools or districts interested in the Model could establish this development capability in several ways: by constituting a group of teachers and curriculum supervisors for the express purpose of designing a Triangle Program; by turning the responsibility over to a district or state-level team of professional developers and subject specialists (including bilingual/bicultural experts); by working with educators at a nearby graduate school or educational research and development facility (such as one of the regional laboratories); or by contracting out the development phase to an organization in private industry or a government task force assembled for curriculum and program development.

3) Assess resources and existing programs: The third step in the development sequence is to comprehensively survey the resources which might be available for development and implementation of a Triangle Program, including whatever previous or existing efforts in bilingual and/or bicultural education have taken or are taking place. This information will control many of the choices that the development team makes about student learning activities, support materials, in-service training, parent/and community assistance and other aspects of the Model which depend on certain kinds of resources.

4) Prepare and initiate a Triangle Program: The methodology for carrying out this fourth step depends on a number of considerations, among them:

- The nature and working habits of the development team constituted to fit the Model to local circumstances.

- The extent to which the guidelines of various sections of the Model are adopted and used by the development team.

- Constraints of time, facilities, and funds.

- The feasibility of pilot testing parts of the program as they are developed.

- Administrative and others' interest and support.

- Changes in the character of the student or teacher population.

- The emergence of competing concepts or programs in bilingual/bicultural education.

- The success of the development team in working with various parts of the Model, such as determining an information/knowledge base ("cultural patterns"), agreeing on student objectives and teacher competencies, and fitting the program requirements for evaluation to district or state standards.

Essentially, what is called for is curriculum and program development, all the parts of which are spelled out by the Triangle Model. The development team can attack these various parts (i.e., objectives, activities, materials, evaluation, in-service training, etc.) in whatever way they choose, the Model is organized around the three subsystems to facilitate development. By defining these three areas of responsibility, the team can divide itself into sub-groups with specific working assignments in the three areas. As an alternative, working sub-groups could be constituted to design components cutting across all three subsystems, such as the "evaluation component."

5) Establish a program management capability: Once the development team has completed its major work, and has designed an operational program ready for trial in a school setting, attention must be turned toward the next phase, implementation. Step five puts the responsibility for establishing a program management capability on the developers so that some continuity is maintained between the development and implementation phases of the Triangle Program. The development team is likely to be in the best position to know and understand exactly what the implementation needs of the program are to be, and yet they may not necessarily be involved in the installation of the program. Thus they must make some preparations for turning over control of the program to some group which can carry out the development team's design, including training the teachers, building support in the school and community, lining up and distributing

materials, etc. As an alternative, an administrative intermediary could be assigned to work with the development team on implementation planning, and then spell out the details of that planning to a later group.

6) Implement the program: Eventually planning and development of a bilingual/bicultural program will be installed in a school or schools. The plans for implementation must specify populations, timelines, resources, personnel, and other logistical factors. The design of this plan is the responsibility of the development team, but upon the decision to actually conduct the program such responsibility must be transferred to the program managers, be that a single coordinator or a group of people.

7) Evaluate and revise the program design: After the program is underway in classrooms, data can be gathered and used by the program managers and perhaps the development team (should they still be organized for further work) to make modifications which will improve the effectiveness of the program. No curriculum or program model survives unchanged from conception to its full manifestation in programs for children, and the Triangle Program will be no exception. Both the development team and the program managers will have to be alerted to make such changes as will ease the evolution of the program. Once that occurs the reality feedback of actual operations may call for alterations of concept and/or practice.

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The document you have read is the result of a four month study intended to produce a model for curriculum development in bilingual/bicultural education. The model focuses on the design of objectives and activities for students which will lead to increased academic achievement in mathematics and other areas (including personal development), upon the competencies and training of those adults and paraprofessionals working with the bilingual/bicultural child, and upon the specification of support considerations involving administrators, parents, and other interested parties. The entire matrix of subsystem components are spelled out under the umbrella concept of a pervasive information/knowledge base (the "cultural patterns") which ought to help guide the many critical choices to be made within each of the subsystems. The utility of the Triangle Model is as a blueprint for a school or school district wishing to establish a comprehensive bilingual/bicultural program in the various areas described herein. The next step is to take this Model and apply its features to local circumstances. These guidelines could serve as the point of departure for development, and eventually implementation teams in schools throughout the United States.

I) PROPOSAL FOR NEXT PHASE

The Model described throughout this report has been addressed to the context and specification of the learner, instructional and support systems of the Triangle Project. The next step requires a link between the Model and the real school world. The staff of this project now offers a framework proposal directed to the initiation of the Triangle Project on a national basis. This framework is based on the Model presented in this report.

The purpose of this framework proposal is to provide a structure for a "Request For Proposal" for the next phase of the Triangle Project. Each item of this framework is offered as a guideline for a full RFP. The total set of guidelines represents a minimum set which would form the basis for the next phase. The staff recommends that both profit and non-profit organizations be invited to bid for the next phase after the development of the RFP.

FRAMEWORK PROPOSAL

1. Schools and Student Population

Two school district with heavy Spanish-speaking populations, one in New York City and one in California. Each of these districts would provide one K-6 school with approximately 500 pupils. All pupils in these two schools will participate. A mix of Spanish-speaking and non-Spanish-speaking children will be found in these schools. Since the Triangle Project is aimed at personal, social, and language development, schools with an expressed desire to participate in these aspects of bilingual mathematics education should be chosen.

2. Staffing

Each school will provide 25 teachers for the project (a ratio of 20 : 1, students to teachers, would result). Ten Spanish-speaking paraprofessionals per school will participate. All administrators, teachers and paraprofessionals within each school will be involved.

3. Program

The program will effectuate the criteria of the Model as presented within this report. The program will follow the general and specific criteria for these areas:

a) Student performance in mathematics.
b) Student performance in language development.
c) Student performance in social and personal growth.
d) Teacher performance.
e) Instructional materials useage.
f) Cultural information/knowledge base

4. Staff Training

Sessions for staff should require special allocation of time for the purposes of training. This might involve release-time arrangements, coordinated with local teacher organizations.

5. Instructional Materials

Materials should be available which lead themselves to continuous progress in the classroom. They should be available in both printed and audio form. Manipulative devices to teach mathematics should be coordinated with the basic program. All materials will be available in English and Spanish, and provide instruction for pupils at all levels of elementary school. Materials should meet the cultural criteria as specified in this report. Materials should reflect the most contemporary aspects of curriculum development (see student objectives in this report).

6. Evaluation

Both formative and summative evaluation should be conducted as vehicles for examination of the program and/or student progress. Guidelines within this report should be followed.

7. Parent/Community

Information systems in English and Spanish will be devised for each school to provide parents and other members of the community with a full description of the objectives and operations of the program.

8. Implementation

Organizations will be invited to respond to an RFP to implement the program. These organizations would normally be those involved in the development of education materials and systems, and the creation and operation of educational programs. While flexibility of approach is desirable, all criteria and specifications within this report should be followed. These will be detailed in a full RFP.

When a full RFP is complete, two competing companies should be chosen, one for each school for the first year. At the end of the first year, the most successful program and the one which wins the greatest teacher acceptance would be retained for a second year to include four additional schools with similar populations as the first-year school.

During all phases of the projects, testing and evaluation will be provided by an independent company, that is, a company not involved in the implementation of the program.

9. Economics

The assumption about economics is that each succeeding year will be less expensive than previous years. Thus the second year (on a per pupil cost basis) will be less than the first year. Exact determinations of per pupil cost for each of the first two years will depend upon a number of cost variables, including materials (paper and audio), development, training, and evaluation.

Independent testing and management support costs will have to be determined separately.

The contractor(s) is to assume all costs of training, development and production of materials and tests.

10. Management Support

Management support will be provided by an independent organization whose function will be to implement the organization of the project, and to provide objective assistance to meet the goals of the project. Such a management support group will be the same group to develop the RFP.

A full "Request For Proposal" including these proposals is the next step for the Project. Each of these items need full clarification, extension and clear reference to the main report. It is conceivable with the appropriate organization that the Project can be initiated by September, 1973.

APPENDIX A

PLANNING AND CONSULTING STAFF

STAFF FOR PLANNING

Educational Program Design Staff

The central design, coordination, and management responsibility for the Triangle Project, and the originator of this Planning Proposal, was Communication Patterns, Inc., of San Francisco. The company has experience in the design of learner, instructional, and support systems in major cities, such as Providence, New York, and Dallas.

The staff of Communication Patterns has experience in instructional materials design, curriculum development, teacher training, and project implementation. They included the following regular company staff who participated in the planning of the Triangle Project:

Dr. Jerome Kaplan, Project Director

Dr. Kaplan has served as Director of Educational Programs for Communication Patterns and has been Associate Professor of Education at Teachers College, Columbia University. While in New York City, Dr. Kaplan directed the elementary mathematics program and the Harlem Project at Teachers College. Dr. Kaplan was also Editor of Individually Prescribed Instruction (IPI) in Mathematics, a national experimental project originated at the University of Pittsburgh, where he also served as consultant to the Primary Education Project at the Learning Research and Development Center.

Professor Kaplan is the co-author of mathematics texts for high school students and a series of books for low achievers in math. He created the Math Modules, a complete system of individualized instruction for elementary schools, and has written extensively about innovations in math education, individualization, programmed instruction, and classroom management. Dr. Kaplan's background with government has included directing the Job Corps Mathematics Curriculum Project and consulting for the U.S.A.I.D. India Education Project. Dr. Kaplan was a visiting professor at the University of Tel Aviv in Israel, where he directed a mathematics program for disadvantaged children.

Dr. Kaplan is the Project Director of the planning phase of the Triangle Program, and as a staff member of Communication Patterns has broad administrative and management responsibility for the staff work and the program as a whole.

Alexander Contis, President of Communication Patterns, was formerly Vice President and Director of Marketing for Behavioral Research Laboratories in Menlo Park, California, where he designed, developed and introduced to the nation's schools the plans known as Project READ and Project LEARN. Mr. Contis' experience in education includes the creation of individualized learning programs, in-service teacher training, and curriculum development.

Monroe D. Schakner, Executive Vice-President of Communication Patterns, is a former chief marketing executive of Behavioral Research Laboratories of Palo Alto, California.

Prior to that, Mr. Schakner headed a marketing and product development group in the Surgical Dressings Division of Johnson & Johnson. He also served as Johnson & Johnson's Director of Education in which capacity he was responsible for the company's extensive consumer Education and Public Relations programs.

CONSULTANTS FOR PLANNING

Systems and Evaluations in Education (SEE) is a non-profit organization for research and service in education and mental health, with special and unique competence in bilingual (Spanish-English) programs.

SEE has completed two years on a Title VII contract involving the development and preparation of in-service teacher training materials which pertain to teaching strategies and curricular modifications appropriate to various groups of children within the Mexican-American public school population. This project has evolved a process for creating in-service teacher training programs which can also be applied to Puerto Rican Americans and the essential features of the basic process will be incorporated by the New York component of the National Multi-lingual Assessment Program.

The Directors of Systems and Evaluation in Education are:

Alfredo Castaneda, Ph.D.
Manuel Ramirez, III, Ph.D.
P. Leslie Herold, Ph.D.

Dr. Alfredo Castaneda, Professor of Education at the University of California at Riverside, is an acknowledged expert in the field of Mexican-American education. He has taught at the University of Toronto, Hunter College of New York, the Ontario Institute for studies in Education and the University of Texas. He is a past president of the National Institute of Child Psychology, and has served as special advisor to the U. S. Department of Health, Education and Welfare.

Dr. Manuel Ramirez, III, Professor of Psychology and Director of Mexican-American Studies at the University of California at Riverside, is one of the nation's leading educators in the field of bilingual-bicultural education for Spanish-speaking children. He has taught at Claremont College and Rice University, served as consultant to the Urban Coalition and to the U. S. Office of Education's "Follow Through Program" and conducted research studies for the Center for Research and Social Change. He is a consultant to the Department of Education of Puerto Rico. Dr. Ramirez is at present developing an elementary school bilingual/bicultural program for the U. S. Office of Education, and is engaged in a national study of educational achievement, language acquisition and cognitive style of the child, with special emphasis on the Spanish-speaking child.

Dr. P. Leslie Herold, Assistant Professor of Psychology at California State College in San Bernardino, has worked since 1965 in developing and administering assessment instruments for Mexican-American children. His experience includes research and supervisory positions in Head Start, Follow Through, Title I, Title VII (Bilingual Education Act) and experimental programs funded by the U. S. Office of Education. Dr. Herold is currently co-investigator with Drs. Ramirez and Castaneda on a study designed to enable teachers to match teaching styles with children's preferred learning styles.

Dr. Stephen Dobbs has participated in three major education projects with responsibilities for curriculum development, program planning, in-service training, materials design and evaluation. Dr. Dobbs was Program Analyst for a JDR III Fund Arts in Education Program in New York City, and Consultant and Research Assistant on the Kettering Project at Stanford University. He is presently Consultant to the Career Education Project at the Far West Laboratory for Education Research and Development in Berkeley. Dr. Dobbs also is a Research Associate in the Institute of American History at Stanford University, and teaches in the De Anza Community College. As a doctoral student he was appointed Post-Graduate Research Psychologist at the University of California at Santa Cruz, and in the subsequent two years has had about a dozen professional publications.

Dr. Henry Palmer, the mathematics consultant for the Los Angeles County Schools, is a leader in the area of mathematics education and computer assisted instruction (CAI). He has served on the Los Angeles County Committee for Accountability and the California State Advisory Committee to the Curriculum Commission. His teaching career includes the post of Senior Professor of Mathematics at the University of Southern California, teacher training at California State College at Los Angeles, and the University of California at Los Angeles.

Dr. Robert Ponce, Consultant for the Ventura County, California, Schools, has responsibilities ranging from English-as-a-Second-Language programs to Mexican-American community relations, in-service training, and education of migrant children. Mr. Ponce is the author or a recent bilingual reading program, Aprendiendo a Leer. He serves on California Superintendent-of-Schools Wilson Riles' Committee on Mexican-American Education, and also has experience with the federal Office of Education's bilingual and bicultural education programs.

Dr. Abraham Fischler, President of Nova University at Fort Lauderdale, Florida, was formerly James Donn Professor of Education and Director of the Social and Behavioral Sciences Center at Nova. Dr. Fischler has also served on the faculties of the School of Education at the University of California at Berkeley and at Harvard University. He is a Fellow of the American Association for the Advancement of Science and has authored numerous books and articles dealing with elementary school change and Curriculum development. Dr. Fischler serves as a Director of the National Education Research Development Laboratory.

Dr. George Spache, Director of the reading laboratory and clinic at the University of Florida, has had a long career in teaching at such schools as New York University, Rutgers, and the University of Maryland. Dr. Spache, a past president of the International Reading Association, has authored numerous materials which have had a significant impact on American elementary school education. These include Resources for Teaching Reading, Toward Better Reading, and Reading in the Elementary School.

Dr. James Cowan, the Ventura County Superintendent of Schools, has been an Assistant Superintendent, Director of Secondary Education, counselor, and teacher. He has served on the Advisory Committee to the Joint Legislative Committee on Educational Goals and Evaluation for California and has recently been appointed to the Board of Directors of the Southwest Regional Laboratory.

Mrs. Evelyn B. Spache is currently an Assistant Professor of Education at the University of Jacksonville in which capacity she is directing the in-service training of more than 4000 elementary-school teachers. Her educational career includes teaching experience at all levels, including pre-school. Mrs. Spache has served as a consultant to a number of school districts including the Ashville, North Carolina, Public Schools, and the Jacksonville, Florida, Public Schools. She has been a featured speaker at IRA and NDEA Conventions, and has co-authored with George D. Spache Reading in the Elementary School. Her other publications include the recently published book Activities for Reading.

Manuel A. Sanchez, Jr. is currently the Director of the Urban/Rural Project in New York City's Community School District #7. He has been Special Assistant to New York City's School Chancellor, Harvey B. Scribner. In this capacity he represented the Chancellor on several important committees, helped formulate school policy, and among other duties, served as liaison between the Chancellor's office and the Puerto Rican community. He has been an assistant to the Bronx Borough

President, and a teacher in the New York City Schools where he served as coordinator of the bilingual program. The founder and past president of the New York City College Hispanic Society, he is active in several influential educational and community organizations, among which are Puerto Ricans for Political Action, the Panel of Americans, the National Council of Teachers of English, and the Puerto Rican Educators Association.